

The Use of Knowledge in Comparative Economics

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Dedication

As my first major scholarly work this dissertation could only be dedicated to my family, who have provided unflagging support and encouragement in all that I have done. Most especially it goes out to my parents, Carl and Emmaline Martin, and their two fathers who we lost during my time in graduate school, “Red” Martin and Whitney Fontenot. My parents and grandparents laid the indispensable foundation for all the good that I have accomplished. I love you all with my whole heart.

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At UD I was blessed with a truly classical education with first rate teachers. The interdisciplinary scope of that education is manifest on these pages. UD is also where I

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Table of Contents

	Page
List of Tables.....	vii
List of Figures.....	viii
Abstract.....	ix
1 Introduction.....	1
2 Where Are the Big Bills? Institutions, Inefficiency, and Knowledge.....	10
2.1 The Endogenizer's Dilemma.....	10
2.2 The Inexorable Efficiency of Markets.....	13
2.3 The Logic of Choice: Subjectivist and Not.....	16
2.4 Action Beyond Mere Choice.....	19
2.5 An Objective Logic of Action?.....	24
2.6 Accounting for Inefficiency.....	30
3 Emergent Politics and the Power of Ideas.....	33
3.1 Organizations and Orders.....	33
3.2 Feedback and Embedded Agency.....	37
3.2.1 Tight and Loose Feedback.....	37
3.2.2 Social Environments and the Extended Order.....	40
3.3 Feedback in Market and Political Processes.....	44
3.3.1 Public and Private Enterprise.....	44
3.3.2 Kirznerian Entrepreneurs.....	50
3.3.3 Tullockian Bureaucrats.....	53
3.3.4 Intermediate Enterprises.....	58
3.4 Politics and the Power of Ideas.....	67
3.4.1 Intersubjectivity and Ideas.....	67
3.4.2 Constitutional Ideas.....	73
3.5 Conclusion: The Role of the Liberal Social Scientist.....	77
4 Critical Realism and the Austrian Paradox.....	80
4.1 Introduction.....	80
4.2 The Impoverished Ontology of the Mathematical Mainstream.....	83
4.3 The Austrian Paradox.....	86
4.4 The Logic of Choice vs. The Logic of Action.....	93
4.5 The Importance of Being Marginal.....	96
4.6 Conclusion and Prospectus.....	101
5 Conclusion.....	105
Bibliography.....	111

List of Tables

Table	Page
Table 1: Rational Choice Schools.....	24
Table 2: The Austrian Paradox.....	91

List of Figures

Figure	Page
Figure 1: The Microfoundations of Comparative Economics.....	5
Figure 2: Feedback to Catallactic Activity.....	61
Figure 3: Feedback to Organizational Form.....	64

Abstract

THE USE OF KNOWLEDGE IN COMPARATIVE ECONOMICS

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The application of rational choice to non-market decision making has revolutionized comparative economics. A fruitful methodological symmetry now prevails in the analysis of economic systems, emphasizing how their underlying institutions affect individual incentives. Most importantly, comparative work now includes traditionally non-economic spheres, such as politics, legal systems, and culture. While this approach represents a huge step forward from the institutional vacuums of earlier models, it has inherited the faulty economic anthropology of the market socialists that created those vacuums in the first place. Failure to account for differences in knowledge-generating properties between institutions has created several blind spots in this new literature. These essays examine the implications of taking knowledge seriously in modern

comparative economics. The first argues that a pure rational choice approach that endogenizes institutions leaves no theoretical space for inefficiency, and that Hayekian knowledge problems must be the root cause of unrealized gains from trade. The second makes the case that market institutions provide tighter epistemic feedback than do democratic political institutions. The result is that markets generate the gains from trade automatically, while politics is reliant on mental models to substitute for institutional feedback. The third essay explores the relationship of this Austrian approach to heterodox social ontology. It makes the case that Austrians, by holding rational choice and knowledge problems side by side, get the best of both the heterodox and mainstream approaches to understanding social reality.

1 Introduction

Such are the pleasures of generalization for those who do not stop to reflect upon the intrinsic differences of the objects of their manipulations.

-Ludwig Lachmann, *Capital and Its Structure*, p. 88

Comparative economics is a field of study being revolutionized from without. As an explicit field of study it has never evolved beyond its incipient context: the Cold War and the 20th century's great ideological debate between capitalists and communists. Having experienced a brief surge of interest with the fall of the Soviet Union, research traditionally filed under the heading of “comparative economic systems” returned to its usual place on the sidelines of the economics profession. Its *raison d'être* now a mere historical curiosity—what is left to say once socialism is off the table?—the field was once again consigned to the dustbin of upper level courses at small liberal arts colleges.¹ And that would likely be the end of the story, were it not for the emergence of the “New Comparative Economics” (Djankov et. al. 2003), a burgeoning literature concerned with institutions and economic development.

The new comparative literature springs from the confluence of several parallel streams in modern economic theory. From law and economics it inherits a concern over differences between legal systems: from common and civil law to direct regulation. With public choice it endogenizes political activity, analyzing differences in types of regimes as well

¹This phrase is not meant to disparage the small liberal arts college, but to indicate the relative status of the field in influencing the wider economics profession.

as constraints on government activity. New institutional economics furnishes it with an emphasis on the centrality of property rights. And development economics supplies its question: why are some nations rich and others poor?

Alongside a decidedly more empirical slant, these factors together have produced three immediately salutary effects. First, the new comparative literature is much more broadly focused than the old socialism vs. capitalism literature. As such, it is vastly more relevant to understanding the world. Second, it has brought economics back to its oldest and most important question. Finally, it has alleviated the autistic impulse of modern economics to focus on formal models of purely technological processes in institutional vacuums. Even the older comparative economic systems literature was often focused on more technocratic matters (e.g., input-output tables). For these reasons, this new literature is perhaps better described as *comparative political economy*.

What generates these differences? If one were to boil them down to their barest essence, I posit that one would find a distinction between what Fraser calls Type A and Type B definitions of economics (Kirzner 1960, p. 17). Type A economics concerns a range of human activities considered to be “economic,” usually demarcated by their connection with wealth, money, or material well-being. Type B economics concerns itself with an aspect of all sorts of human activity, usually dubbed “economizing.” Traditional comparative economics falls firmly in the Type A camp, concerning itself only with differences in how societies allocate control of the means of production. Consequently, the range of debate was always defined in terms of communism vs. capitalism. The new

comparative economics, however, is “economic” only insofar as it understands the operation of various institutional settings in terms of economizing human behavior.

The new comparative economics has taken significant strides forward primarily by folding in the various strands of economic theory that analyze “non-economic” behavior. With different sorts of human activity endogenized, the systems that comparativists compare have expanded considerably. Now dictatorship vs. democracy, common law vs. civil law, and even traditionally orthogonal comparisons such as democracy vs. markets are all part of the comparative oeuvre. And because it tackles *any* sort of social system from an economic point of view, the questions are necessarily big and abstract.

The shift from a Type A to a Type B approach to comparative systems should be hailed as a great advance. But this is not to say that it is without faults. The new comparative economics by and large recognizes the importance of property rights and the disastrous consequences of socialist planning. Thus, unlike the older mainstream consensus out of which traditional comparative systems analysis was borne, it does not side with the conclusions of the market socialists in the economic calculation debate. But it has inherited their faulty economic anthropology. By using the same model of economic agency that barred neoclassical economists from recognizing the importance of monetary calculation, freedom of entry, and property rights, the new comparative economics ultimately limits its ability to understand crucial features of various institutional settings. While it asks all the right questions, and (admirably) appeals to real world data to help answer them, I fear this new literature will offer only theoretically hollow explanations

for the differences it observes that do little to advance our understanding of the fundamental causal mechanisms at work in social processes.

The aim of this dissertation is to arbitrate between the Austrian understanding of knowledge problems and the questions and scope of the new comparative economics. In a sense, the Austrians can claim to have invented the field of comparative economics in the post-marginal revolution economics profession. It was Mises who forced the debate over capitalism and socialism among economists to take place within the boundaries set by economic theory. But the substantive arguments Mises and Hayek made fell on deaf ears due to an underlying difference in economic anthropology between the Austrians and other marginalists. Whereas the rest of the profession conceived of economic reasoning only in terms of man's response to scarcity, for the Austrians man is confronted by both scarcity and uncertainty (i.e., sheer ignorance). In Kirzner's terminology, the Austrian move is to move beyond the narrow logic of choice—man's response to scarcity—to the broader logic of action which pays due attention to knowledge problems.

In taking on this topic, my aim is not to rehash the socialist calculation debate. I take it as given that the Austrians were correct. Rather, my purpose is to build on the insights gleaned from that controversy—especially as they regard economic anthropology—to fill gaps in the new comparative literature, broadly understood. That is, I do not limit myself to the self-identified new comparative economics, but also explore its component pieces with a special emphasis on public choice. The exercise, simply put, is: how does our understanding of various institutional settings and the differences between them change

when we insert Austrian style agents into them? What happens to the new comparative economics when “economics” means applying the logic of action, and not merely the logic of choice?

Austrian insights about knowledge should not be a mere hand-waving, stop-gap argument against interventionist policy proposals. If they offer real fruits, they should inform our positive understanding of social processes. It is for this reason that I stress the importance of deriving the panoply of Austrian knowledge arguments from a foundational assumption about human behavior. Identifying Knightian uncertainty at the praxeological level opens the door to genuine cross-institutional comparisons, for the nature of action does not change when institutions do. The pure logic of choice, it will be shown, is not a sufficient tool for comparative analysis. But it is necessary. The reason I privilege uncertainty—rather than other formulations of agents' ignorance—is its close relationship to choice. Scarcity of means necessitates that man must choose among opportunities for acting. Uncertainty means that the opportunity set he faces is not given to him. He must construct it subjectively. The importance of this dual approach to human agency is summarized in Figure 1.

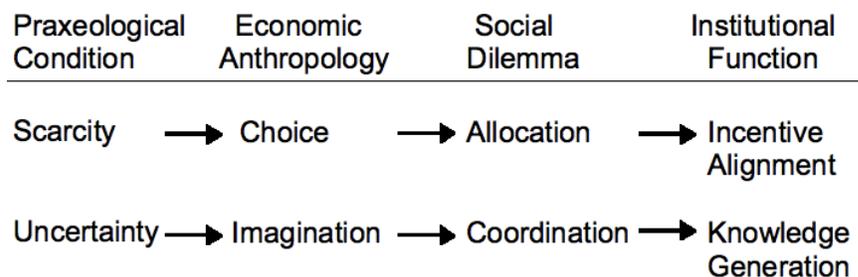


Figure 1: The Microfoundations of Comparative Economics

The first row of Table 1 sums up the neoclassical approach to institutional analysis. Scarcity is the fundamental condition facing purposive agents. This constraint on purposiveness leads to an anthropology focused on choice, or the individual allotment of means to competing ends. Thus goes the analysis of a Robinson Crusoe economy. The next step is to turn this anthropology loose in a social setting: other agents with their own purposes inhabit a world with a common stock of fixed means. With the advent of the marginal revolution, both the production of further means and the distribution of existing means are matters of allocation. The dilemma of social living is: towards which (and thus whose) ends will scarce resources be allocated? This question is described as a dilemma because it has both cooperative (positive-sum) and non-cooperative (zero-sum) answers. Which answer is given will depend on the incentives of individual agents. Institutions—usually defined as the rules of the game—serve to align the incentives of the various members of society so that they can effectively realize the gains from trade and curtail conflict. Different institutions may of course succeed to a greater or lesser degree.

The Austrian approach to social science accepts this account of institutions as true. But it does not accept it as complete. Making room for the effects of uncertainty does not undermine this broad portrait, but rather adds to it. How it does so is captured in the second row of Table 1. Uncertainty, as stated above, means that the opportunity sets over which man chooses are neither given nor fixed. Agents must, in turn, imagine potential means-ends frameworks on which to act. This part of action, omitted from standard economic analysis, is identified with entrepreneurship in the Austrian tradition. On the

individual level, it creates the possibility of genuine error. On the social level, it introduces the possibility of divergent understandings of available options. One individual's opportunity set may not be another's. This may involve divergent expectations or even incommensurable ideas for how to cooperate. The imaginations of individual agents thus need to be coordinated to generate any semblance of social order. The purpose of pointing this out is not to posit that there is a disharmony that ought to be remedied, but rather that existing institutions are doing more than neoclassical analysis reveals. The debate between Austrian and the market socialists followed exactly this pattern, with Austrians recognizing that market institutions solved this additional knowledge problem not accounted for by their opponents. Institutions must generate knowledge so that social activity may be effectively coordinated. This is the missing piece from modern comparative institutional analysis, just as it was missing from the dominant theory of markets in the 1930's.

Chapter 1 examines one substantial failing of the pure rational choice framework to understanding institutions: once institutions themselves are endogenized into a rational choice model, there is no room for economic inefficiency. Inefficiency—conceived of as failing to fully exploit potential gains from trade—is in turn a critical part of accounting for cross-country differences in economic development. The only reason such potential gains from trade might go unexploited is not cost—for if they are too costly to exploit, they are not really potential gains—but rather ignorance of their presence. Hayekian knowledge problems, predicated on a microfoundation of uncertainty, must thus underly inefficiency. I then argue that radical subjectivism, another key Austrian tenet, is a

crucial component of this theory. Finally, this chapter argues that once we have opened the Pandora's box of changing opportunity sets, it is more useful to conceptualize efficiency as the ability of institutions to generate knowledge of the gains from trade, rather than a snapshot judgment as to whether all such gains are already exhausted. Efficiency should be thought of as a property of institutions, not a state of the world. Comparing how and how well institutions generate knowledge allows for substantive cross-institutional analysis not predicated on universal efficiency or institutional convergence.

Chapter 2 engages in just such a comparison utilizing the concept of environmental feedback to agents' conjectures. Ideas—mental models of an agent's environment—serve as a substitute for feedback. As a result, the particular mental models that an agent holds will matter far more in loose feedback environments. It goes on to argue that market institutions offer tighter epistemic feedback from the continually shifting conditions of the social division of knowledge than do political institutions. As a result, ideas matter more in politics than in the market process. This insight is fleshed out by analyzing how political agents are constrained by the necessity of public articulation, allowing other agents to bring their mental models to bear. It concludes with thoughts on the role of the economist in the polity.

Chapter 3 takes a less theoretical and more explicitly methodological tack. It addresses the relationship of Austrian economics to the critical realist project, so named for its critique of mainstream economics' social ontology. The argument centers on what I dub

the “Austrian Paradox,” that Austrian analysis is rational choice theoretic and yet embraces emergence, open processes, and other aspects of heterodox social ontology. I posit that the addition of uncertainty to a rational choice model of agency allows Austrians to get the best of both worlds. Uncertainty serves as the foundation for important heterodox concerns, while a strict adherence to rational choice is necessary for critical realism's own ontology of institutions to make any sense.

My hope is that these three essays, taken together, will reveal the potential fruitfulness of importing a richer economic anthropology into the study of comparative systems. In proposing this, I am well aware of the tendency for “richer” to mean muddled, unsystematic, and *ad hoc*. By focusing on one narrow aspect of action, already tied to choice itself, I have sought to retain as far as possible the elegant simplicity of more traditional economic analysis. Whether the (imagined) benefits exceed the costs must be for the reader to ascertain.

2 Where Are the Big Bills? Institutions, Inefficiency, and Knowledge*

2.1 The Endogenizer's Dilemma

The history of post-WWII economics has been marked by a series of progressive endogenizations. One sort of behavior after another has been brought under the rubric of rational choice, from marriage and the family to crime and addiction. The most significant arena now baptized into the church of constrained optimization—at least for the development of political economy—is the political itself. Under the heading of public choice, the economic way of thinking has successfully illuminated a wide array of political phenomena from the behavior of interest groups to the longevity of bureaucracies. But to the extent that these explanations work, they cordon off what was once the economists' own territory of proffering policy advice. Reder notes perceptively:

Successfully to endogenize a new variable is to enhance the explanatory power of economics, and there is much interest in such achievements. However, it must be noted that where variables are made “endogenous,” they can no longer serve as objects of social choice...

Many Chicago economists, therefore... have moved toward becoming disengaged analysts of the political-economic-social process rather than defenders of laissez-faire. (Reder 1982, p. 35)

*Previous versions presented at the Public Choice Society annual meeting in San Antonio, TX, in March 2008 and “From Vienna to Virginia” at the Foundation for Economic Education in September 2008. I am grateful to Richard Wagner, Jochen Runde, and various participants at both meetings for helpful feedback. Any remaining flaws are my own.

Once economists admit of an economic theory of politics, policies that might affect economic outcomes are themselves economic outcomes. Public choice thus drives a wedge into the previously isomorphic relationship between tweaking assumptions in a model and tweaking policies in reality. It makes no more sense to critique a particular policy than to critique the price of a good that emerges on the market.

But more is at stake here than mere advocacy. The progressive endogenization of different forms of activity threatens the power of economics to explain—in a purely positive light—the wealth and poverty of nations. Economics rules out the existence of “big bills lying on the sidewalk,” but these must exist if we are to explain, *with economics*, the wide divergence in incomes that spans national borders (Olson 1996). To “explain” a phenomenon with the tools of economics is to render it as the outcome of rational choice. Whether the individual cheats or cooperates, learns or remains ignorant, plunders or produces, that choice is always a constrained optimum. The most natural place to look for an explanation, then, is in the constraints that agents face. Less onerous constraints mean more wealth, and vice versa. But which constraints?

The broad consensus has been that “institutions rule” (Rodrik 2004). Not only does this general thesis command broad empirical support, it is decidedly “economic.” Appeal to other constraints such as natural resource endowments, geography, or technology may have some explanatory appeal, but they also punt on the foundational economic question. If the tools of economics cannot answer the most fundamental economic question, maybe a different set of tools is needed. Those undiscovered bills must be somewhere.

Fortunately, comparative institutional analysis (Demsetz 1969) offers a way out, calling upon the unique skills of the economist in comparing the outcomes of political and market processes alike. Different institutional mixes engender different patterns of exchange and distribution, accounting for the sharp differences in economic activity across national borders. Big bills do not lie on the sidewalk *within* and institutional regime, but rather *across* institutions.

But the specter of endogenization has come back to haunt economics yet again. Institutions, like politics and markets, are fundamentally social. They arise from individual action, and as such can be analyzed with the tools of economics. A country's institutional mix is thus itself the result of constrained optimization (e.g., Djankov et. al. 2003). Any supposed gains to be had by institutional transition must then be balanced by costs in the institutional generation game in which politics and markets are nested. One way to explain the institutional mix is to appeal to constraints on the level of geography or resources (cf. Acemoglu et. al. 2001, 2002). This route, of course, cedes the explanatory power of economics to other disciplines. The other alternative, to explicate institutions in terms of the constraints imposed by some “deeper” social phenomenon, such as culture, will only meet the same end. Either economists will have to conjure up a yet deeper social structure or appeal to exogenous (non-economic) forces.

What is the economist to do? Should he give in, uninstall STATA, hang up his blue blazer and Adam Smith tie, and leave the world to Jared Diamond? I argue not. My success depends entirely on locating a satisfactory notion and source of economic

inefficiency. If our explanations of social systems expel inefficiency by construction, explaining the wealth of nations must fall to other disciplines. Moreover, lest the soul of economics be compromised, this account of inefficiency must ring true within a rational choice framework.

2.2 The Inexorable Efficiency of Markets

Economists have a hard time uncovering inefficiency. Since the marginal revolution, the basic logic of market clearing has held powerful sway over dismal scientists of (nearly all) stripes. Starting from the tautological basis that individuals seek to minimize costs—that is, minimize the opportunities foregone to serve their ends—the natural conclusion is that all mutually beneficial exchanges will tend to take place. If both potential parties to a potential trade see it as advantageous relative to other opportunities, they will trade. Under the standard assumptions of perfect competition this process continues until the Pareto frontier is reached and any further move will harm at least one party.

The first major challenge to this neoclassical orthodoxy came from Pigou (1932). Pigou raised the issue of externalities, or costs that do not fall on the relevant decision maker.² The individual can minimize his own costs by imposing costs on others. The smoke stack provides the classic example: the operator of a polluting factory does not bear the cost of the smoke he dumps on his neighbor's laundry. Because of the incentive to overindulge on the externality-producing good, social cost will not be minimized. Externalities thus create the potential for inefficiencies.

²For ease of exposition, I will only refer to costs rather than “costs and benefits,” but the logic is identical.

Then along came Coase, whose classic 1960 article imploded the idea that there was a one to one correspondence between externalities and inefficiency. If an externality really results in an inefficient use of resources, why does the potential gain not occasion a bargain between the concerned parties? If laundering is really a better use for the air than soot disposal, the launderer ought to be able to offer the factory owner a price to pollute less such that they both gain. Thus, efficiency should reassert itself *if* there are no costs to transacting. In making this argument Coase forced all subsequent market failure theorists to explain why it is more costly for agents to remedy a market failure than to endure it.

Demsetz (2003) puts forward a trenchant critique of Coase's argument: surely inefficiencies will be bargained away when transaction costs are zero, but they will also be bargained away when transaction costs are positive. Demsetz begins from the assumption that the factory operator owns the neighboring clothesline as well. No externalities exist, because the cost in dry laundry or factory output is internalized. If calculation is costless, the owner will release just enough soot. If calculation is costly, he will calculate enough so that further gain in precision would be more wasteful than the promised savings. As with Stigler's economics of information (1961), there is an optimal level of imprecision. Costs will be minimized probabilistically rather than exactly, but they will be minimized.

The possibility of multiple ownership fails to overturn this logic. The cost of calculation is the cost of finding the optimal level of interaction between the two uses to which a

resource can be put. Whether they take the form of management costs under unified ownership or transaction costs under separate ownership, the cost of determining the optimal mix of output must itself be considered when calculating the optimum. Put more simply: transaction costs are costs. They therefore constitute part of the constraint in a constrained optimization, and there is no reason to believe that total cost is not still minimized. The efficient solution is obtained:

If transaction cost and management cost are positive, then some effects of interaction seemingly are “neglected” if profit is maximized. But efficiency requires this neglect, since costs of coordination should be taken into account in deciding just how finely to “tune” the interaction between these activities. To ignore costs of coordination surely is to allocate resources inefficiently. (*ibid.* 289)

If transaction costs could really be a source of inefficiency, the solution to eliminating inefficiency would be obvious: centralize the control of everything. This solution, of course, ignores the parallel insight from Coase's theory of the firm that there are costs to management (Coase 1937, Calabresi 1991). If transaction costs are not worth bearing, taking the course of action that they bar would itself be inefficient.

The essence of Coase's insight is that transaction costs are no different from any other costs. As such, to put the matter in technical language, they may at any given moment help define the Pareto possibility frontier, that series of social states that represent the best we can do at the moment without making someone worse off. But so does the fact that we do not have an engine that runs with less friction or that manna does not rain from heaven. (Calabresi 1991, pp. 1218-9)

I have emphasized this Pigou-Coase strand in the literature because transaction costs are *the* go-to mechanism by which economists account for the endurance of inefficiencies. But efficiency is simply constrained social optimization. It is thus curious why economists ever thought that a transaction cost—a constraint—could compromise efficiency. To posit an inefficiency due to transaction costs requires an analytical sleight of hand, by which a cost is ignored in describing a fictitious optimum and then smuggled

back in as a barrier to achieving it. It will be useful to address other frequently proffered sources of inefficiency further on, but my concern is not particular arguments so much as the compatibility of inefficiency with choice-theoretic explanations more broadly. This brings us back to endogenization.

Thus far I have discussed only markets. And—provisionally, at least—neoclassical economics points towards their efficiency; a problem, if we are to answer Adam Smith's challenge. Endogenizing non-market processes transposes this dilemma onto other spheres, leading to a singular result: what is, is efficient.

2.3 The Logic of Choice: Subjectivist and Not

As progressive endogenization has proceeded, potential sources of inefficiency have moved “up” the chain of nested social games. Before economists worked out the logic of market clearing, one could argue for market failures due to simple mistakes or sheer stupidity. As rational choice theory marched boldly on, however, the source of inefficiency was pushed further back: to policies, then to the rules of the political game, then to institutions that adjudicate between state and market, and then on to deeper constraints like culture or geography. In each case, the endogenization of a stage of the game eliminates the possibility of accounting for inefficiencies by appeals that stage. In order to see more clearly where this leads, we might envision a fictional conversation between Milton Friedman and George Stigler that would go something like this:

Milton: As you can see, the excise tax on cigarettes does not just transfer wealth, it also generates inefficiency because some cigarette sales do not happen at all.

George: Your analysis ignores the benefits that accrue to the voters expressing their preferences through the voting process.

Milton: I need not ignore them, I simply have to point out that the decision makers will overindulge their preference because the policy imposes an externality. They do not bear the full cost of the tax.

George: Ah, but if the tax really is inefficient, the smokers should be able to buy off the anti-smoking constituency and have it repealed.

Milton: Transaction costs make compensation too costly, so the inefficient policy remains in place.

George: Then the tax remains optimal, because it is less costly to forego the potential gains from trade than to fight the tax. If it is costly to deter crime, the optimal amount of crime is not zero.

Likewise with rent-seeking and other political action.

So far our two heavyweights have only gotten as far as my analysis above. But what if Milton were to respond: “I agree, but neither the externality nor the transaction cost would exist in an alternative institutional framework. Net consumer surplus would be higher in the absence of jockeying for transfers, so could we not call that institutional regime more efficient?” I have tailored the discussion this way so as to isolate the difference between two possible responses to this question from divergent branches of the marginalist, rational choice tradition. For convenience, I will discuss these two branches as the “objective” and the “subjective” theories of rational choice, though these labels should be understood in relative terms. The more objective theory can be traced back to Marshall and his scissors, for whom costs can be both technical tradeoffs and subjective evaluations, equal to one another in the limit of perfect competition. The more subjective theory can be traced back to Menger, for whom cost is wholly subjective.

The objective theory treats institutions as *influencing* or *co-determining* costs. Better institutions lower transaction costs, allowing for more of the potential gains from trade to be realized. Extending the Demsetz argument from markets to institutions, supposed inefficiency is only established by ignoring the transaction costs of institutional reform. Calabresi (1991) draws exactly this conclusion, using the purely hierarchical firm and the purely decentralized market from Coase's two great papers as the endpoints on a spectrum of institutional possibilities. If institutional transition really is more efficient, it will take place, just as firms decide whether to make or buy. This theory is “objective” because it compares across institutional contexts. The costs and benefits of transition by collective action are out there to be observed, so there is no reason to believe that efficient transitions will not take place.

The subjective theory, by contrast, treats institutions as *co-generating* costs. Since cost exists only at the moment of choice (Buchanan 1969), it can only exist within an institutional context, not between them. Eschewing the hypothetical perspective of the benevolent social planner, this approach admits only the cost borne by the agent in the model. The two costs for the “same” action undertaken under different regimes are thus incommensurable. Costs are tautologically minimized *within* the institutional framework in which agents choose. This position comes into play not just for hardline subjectivists, but any time the importance of transaction costs in negotiating a new institutional regime are denied. Demsetz makes just such a move, arguing that neoclassical analysis assumes—and does not apply outside of—well defined and enforced property rights. Hence, comparisons based on efficiency measures are simply inapplicable:

There may be better or poorer choices of rights assignment, just as there may be better or poorer distributions of wealth. These choices, one made by the legal system and the other by the political system, may affect the value of goods produced in a society. A variety of concerns lead to the support and criticism of wealth distribution policy, but we do not proclaim inefficiency in the operations of the economic system because a wealth distribution policy has reduced the total value of goods produced. (Demsetz 2003, p. 295)

The logic of choice, in either its subjective or objective form, thus fails to provide any real possibility of inefficiency. Of course, rational choice theory can still explicate why certain patterns of action emerge. But such patterns are always efficient: by construction for the objective logic of choice, and by definition for the subjective logic of choice. Limiting economic explanations to constrained optimizations leads inexorably to loading all of the explanatory power on constraints. Endogenization then runs its course until only constraints exogenous to economics remain and must be ultimately responsible for the wealth of nations; unless, of course, we can find a source of inefficiency that is neither within the logic of choice nor outside the realm of purposive action.

2.4 Action Beyond Mere Choice

Rational choice theory cannot itself account for inefficiency. Economic systems driven by marginalist engines inevitably dissipate rents. Without repudiating this fundamental feature of neoclassical economics, the subjective logic of choice offers a way out. To argue that institutions co-generate costs—rather than merely codetermine their magnitude—evokes the question of how. By locating inefficiency at the level of which costs come to be, economic theory can maintain the tautological minimization of costs while still allowing for big bills lying on the sidewalk. Unlike the standard theory of externalities, it is not a question of who bears the cost, but whether tradeoffs are perceived at all. This means moving beyond just the logic of choice to the more expansive logic of action.

Cost is always determined within an opportunity set. Absent a list of other possible courses of action, it is impossible to know what is being sacrificed in making one choice rather than another. Opportunity sets, according to the more subjective theory of choice, must be constructed by the agent. Costs are thus the subset of possible tradeoffs that are actually perceived and are always minimized.³ But if opportunity sets are subjectively formed, the theory of action can treat more than just choice. Rational choice remains the centerpiece of agency, but opportunity set formation must be accounted for as well. It will determine which possible tradeoffs are actually perceived as costs. Unexploited gains from trade exist in the gaps in man's knowledge.

If all perceived profit opportunities are exploited, inefficiency must result from a failure to perceive a potential opportunity (Kirzner 1978). Because such tradeoffs are not perceived as costs they cannot be taken into account, much less bargained away. This possibility has gone under many names in the literature, including the knowledge problem (Hayek 1945), sheer ignorance (Kirzner 1992), and Knightian uncertainty (Knight 1921, Langlois 1994). It should not be confused with information economics, in which agents know there is some piece of valuable information that they lack. Obviously such ignorance is only at play after opportunity set formation, and so will operate like any other constraint: agents will optimize on expected values (Stigler 1961). Rather, only *ex ante* ignorance of possibilities can result in inefficiency, because the real tradeoff must not correspond to the cost. Mistakes may or may not be revealed later so long as tradeoffs are not perceived at the moment of choice.

³Dubbing cost a subset of tradeoffs is a simplification for ease of exposition. Costs can of course be *mis*perceived, as is the case when a relevant option is omitted. Nonexistent costs may also be imagined.

But this straightforward theory of inefficiency within markets is not wholly satisfactory given our preceding inquiry. If inefficiency results from agents' inability to perceive possibilities, how can inefficiency be ascertained? Without some reliable mechanism of *ex post* evaluation such judgments are but sound and fury. Business profitability only insures survival of the fit, not of the fittest. The presence of accounting profits fails to indicate that no opportunities were missed. Judging the relative efficiency of a social system or enterprise across time may frequently be impossible.

Fortunately, a more fruitful and relevant tack can be taken. Rather than considering the efficiency of individual decisions, the political economist can focus on the ability of different institutions to generate knowledge that accurately conveys tradeoffs into costs and to correct errors. This brings us back to a comparative institutions approach, but one that concerns the knowledge generating properties of institutions. A more efficient institution equips choosers with more knowledge of relevant tradeoffs.⁴ While the economist can make no claim to know what tradeoffs would be revealed in the presence of an alternative institution, he can compare the ability of different institutions to aggregate local and dispersed knowledge more generally.

The socialist calculation debate offers the *locus classicus* of this sort of reasoning. Mises (1920) argues that money prices serve an invaluable function in evaluating alternative uses for resources. Monetary calculation reveals the relevant tradeoffs. In the absence of prices, “rational” allocation (i.e., that which allows for advanced material production under the division of labor) becomes impossible. When the market socialists counter-

⁴“Relevance” should be construed relative to the agents' desire to satisfy other ends.

attack by accepting the necessity of prices, Hayek's (1945) response is instructive: rather than questioning the incentives of socialist plant managers to play market, he contrasts the knowledge-generating properties of centralized trial and error processes with those of decentralized markets. Markets aggregate local and dispersed knowledge, allowing for more efficient adjustment to changing conditions. Centrally administered prices are better than no prices, for they embody some knowledge. But market prices reflect even more knowledge because they allow freedom of entry and reward the insightful. Anyone who thinks they have a better idea or more accurate knowledge can try it out and use existing prices as a guide. The more successful of these entrepreneurs then command more resources, so prices tend to reflect the best guesses of the most astute guessers. It is not that a centralized decision can never embody a better guess than the alternative decision on the market, but that the possibility of economic calculation gives the market an upper hand. Markets aggregate more knowledge than centralized planning bodies, so agents in markets face costs that better reflect the tradeoffs their actions induce.

In public choice, the Virginia school has been the standard bearer for the subjective logic of action (c.f. Mitchell 2001). Take the arguments against Ricardian Equivalence in *Democracy in Deficit* (Buchanan and Wagner 1977). Ricardian Equivalence argues that government deficits are not harmful—or at least no more harmful than increased taxes—because households save enough to pay the inevitable future tax increases. The amount of resources necessary to carry out the government project in question is the same in either case. Buchanan and Wagner contest this point, claiming that deficit financing suffers from “fiscal illusion.” The institutional setting in which government budgets are

determined is *not* isomorphic to a decision to borrow by a private individual. The resource tradeoff may be the same regardless of the financing, but the costs faced by agents in the two processes are very different. Buchanan and Wagner argue that tax financing more closely corresponds to the real tradeoff and thus for the relative efficiency of a balanced budget amendment. They even posit that a monthly tax bill would make fiscal operations even more like market prices, making the perception of costs conform more precisely to the corresponding tradeoffs.

But if the knowledge-generating properties of institutions can be ascertained, why do inefficient institutions persist? In the absence of accurately perceived costs, there is no reason to suppose any convergence to efficiency. And since institutions determine which tradeoffs are perceived as costs, agents are even further removed from discovering the unseen profit opportunities from institutional transition. The Coase Theorem works its magic in the context of prices that allow for economic calculation. Absent exchangeable property and thus prices, the conditions are not right for a political Coase theorem (c.f. Acemoglu 2006). Where such political processes displace markets, they conceal some of the tradeoffs that markets would have revealed. Even if agents know that tradeoffs exist, their magnitude remains a mystery. Institutions thus need not converge to efficiency⁵; they need only be incentive compatible to survive.

⁵Also, absent some error correction mechanism, there is no reason to believe that beliefs about the knowledge-generating properties of institutions converge to a correct picture. And even further, once we admit “sheer ignorance,” there is no reason to assume that beliefs about the knowledge-generating properties of institutions even exist in the first place.

2.5 An Objective Logic of Action?

The subjective logic of choice cannot itself account for inefficiency. Knowledge problems must be allowed for. But if knowledge carries the explanatory load, might it be separable from more stringent subjectivism? Similarly, is subjectivism a necessary theoretical condition for inefficiency, or can it be dispensed with? If the treatment of knowledge problems—problems of ignorance beyond mere lack of information—can be severed from subjectivism, perhaps the superior mathematical and statistical tractability of the more objective logic of choice can be brought to bear in analyzing inefficiency. In fact, I would go so far as to claim that the “objective logic of action” comprises the current cutting edge in political economy. The breakdown of theoretical possibilities and their practitioners might be depicted as such:

Table 1: Rational Choice Schools

	Subjective	Objective
Logic of Choice	<u>UCLA</u> Alchian Demsetz	<u>Chicago</u> Stigler Becker Wittman
Logic of Action	<u>Austro-Virginian</u> Mises Hayek Buchanan Tullock Wagner	<u>“Cognitive”</u> Thaler Caplan

All quadrants but the southeast have been discussed above. For the northeast, “what is, is efficient.” The modern (post-Knight, post-Friedman) Chicago school epitomizes this approach: calculative rationality works its magic in any social context. Wittman's *The Myth of Democratic Failure* (1995) is the outstanding representative in public choice.

The northwest treats institutions as incommensurable, and thus cannot engage in cross-institutional efficiency comparisons at all. Alchian and Allen's textbook *Exchange and Production* (1983, p. 6) explicitly states that its analysis only bears relevance for market oriented societies such as the United States. Demsetz's aforementioned insistence that neoclassical economics necessarily assumes private property rights is another example. There is no corresponding public choice school in this quadrant.⁶ Finally, the Austrian and Virginia schools occupy the southwest. Modern Austrians have cross-applied the original calculation argument to a variety of issues, from regulation (Kirzner 1985, ch. 6) to nation building (Coyne 2007). Virginian contributions include Tullock's (1965) analysis of the knowledge-generating properties (or lack thereof) of bureaucracies and Wagner's (2007) treatment of fiscal outcomes as emerging from a competitive nexus comprised of both private enterprises armed with economic calculation and public enterprises armed with the power of coercion.

The southeast quadrant is occupied by many burgeoning subdisciplines in economics, and is home to a variety of eclectic approaches. An interdisciplinary approach combining cognitive psychology and economics probably constitutes its most salient characteristic, so I have labeled it "cognitive." Thinkers in this quadrant utilize the standard tools of the objective theory of choice modified by limitations or flaws in human cognitive processes. Like Austrians and Virginians, their concerns reach beyond mere possession of information to how it is processed. Behavioral economics exemplifies this approach (c.f.

⁶This could be due to the general underdevelopment of the subjectivist branch of neoclassicism, or due to the inability of such a stance to draw efficiency comparisons. Note that this position does not rule out any comparisons, only those based on efficiency considerations.

Thaler 1992), but lacks a sufficiently comparative slant: potential lapses in rationality only matter for explaining differences if various institutions cope with them differently.⁷ I instead turn to Bryan Caplan's work on irrationality in politics, which offers the best opportunity to probe the potential benefits and limitations of an objective logic of action.

The objective logic of choice differs from its subjective sibling not in how valuations are made, but in how opportunity sets are formed. Both boxes in the eastern half of Table 1 treat opportunity sets as given to agents. Consequently, “sheer ignorance” is out of the question. Agents are aware of *all* possible courses of action, each of which carries an expected payoff that factors in their probabilities for success. Furthermore, unsystematic errors should cancel out. The objective logic of action thus relies on the notion of bias, the systematic deviation of beliefs from objective expected values. Agents cannot be wrong about their list of options. Inefficiency thus entails that they be wrong about potential payoffs in a way that is not corrected by mere information acquisition. Rather than sheer ignorance, invincible bias constitutes the knowledge problem. Deviations from Pareto optimality flow from the absence of accurate expectations about costs and benefits: the potential gains from trade are there, but *misperceived*.

But therein lies the rub: in what sense are the gains “potential?” Most economics posits potential gains that simply ignore the transaction costs preventing those gains. The perspective of the omniscient, benevolent social dictator provides the point of comparison

⁷ Douglass North's work on the importance of mental models seems like an obvious candidate, but I shall refrain from extended discussion of it for three reasons: (1) its depth and complexity deserve a far more detailed analysis than I can provide, (2) it may actually belong in the southwest quadrant, and (3) my chosen emphasis is public choice.

by which the theorist judges inefficiency. Thus begins the nirvana fallacy (Demsetz 1969). To evade its pitfalls, some alternative point of comparison must be posited. Theories of bias thus confront a dilemma: either some institutions must cope with bias better than others or not. If not, there is no inefficiency. Limited rationality constitutes a hard constraint, helping to define the Pareto frontier. Just like any other explanation that eventually rests on exogenous forces, this position abdicates the explanatory power of economics to other disciplines. But if institutions do cope differently with bias, there may be some role for the economist yet.

Bryan Caplan's *The Myth of the Rational Voter* (2007) is of interest for making precisely this sort of argument. It has two central theoretical planks: that agents gain utility from holding irrational beliefs, and that different institutions have different costs of doing so. Caplan calls the first plank “rational irrationality,” which accounts for “irrational” (biased) beliefs by treating them like any normal good (Ch. 5). Individuals will hold biases that give them pleasure whenever the cost of doing so is low. The comparative institutional space is laid out from the introduction: democracy vs. markets (p. 3). Whereas markets internalize the costs of holding irrational beliefs—leading to unbiased appraisals of market conditions and market efficiency—democracy does not. The infinitesimal chance that a single vote will determine the outcome of an election gives voters no incentive to overturn their biases. Individuals maximize their utility by satiating their desire to believe certain myths since they bear essentially zero cost from doing so. They vote based on emotional commitments, imposing the costs of bad policy on the rest of the polity.

Caplan's argument turns on institutional differences. The same individuals with the same biases participate in both markets and elections. In markets, indulging those biases is expensive, but democracy is a different creature. "Democracy is a commons, not a market" (p. 206). As a commons, the cost of holding biased beliefs spills over: a classic externality argument. But this invokes the Coasian question: why is the externality not internalized? If democratic policy really is inefficient, there must be some way to compensate the losers. If the cost of compensation is too high, the current institutional mix between markets and democracy must be efficient. Individuals have two forums for expressing their preferences, one for their material interests and one for their emotional commitments. Biases grant some utility, so why is a mechanism for buying cheap utility with votes inefficient?

Perhaps the answer lies in a biased attitude toward democracy itself. After all, if voters are biased about the efficacy of democracy itself, maybe they refuse to see the costs of adopting democratic rather than market institutions. Biases concern not only policy choice within an institutional framework, but the valuation of institutions themselves. It's turtles all the way down. But this way out once again invokes the endogenizer's dilemma: either the biases over institutions represent a hard extra-economic constraint, or there is some deeper level of social reality that must be further endogenized. Either way, efficiency forcefully reasserts itself. In effect, Caplan has simply added another parameter to the utility function. In this case, the plight of underdeveloped nations dissipates entirely into preferences: what they give up in wealth they gain in indulgence

of the irrational. To wish otherwise is to wish only that preferences were different from what they are.

My purpose has not been to single out Caplan for criticism. Indeed, his comparative institutional case is a vast improvement over other cognitive accounts of inefficiency. Absent that approach, knowledge problems are mere exogenous constraints. But his argument illustrates two crucial points: if knowledge problems are to account for institutional efficiency, (1) they must not be reducible to incentives (costs and benefits) and constraints and (2) the persistence of inefficient institutions must be accounted for. If knowledge problems are costs or constraints, they are no impediment to optimization. Likewise if they are avoidable under an alternative institutional regime.

My purpose in exploring the possibility of an objective logic of action has been to highlight the complementarity of subjectivism and knowledge problems. The subjective formation of opportunity sets permits the possibility that agents have missed some facets of a problem structure entirely. Institutions can perform better or worse in revealing these facets, and sheer ignorance means that there is no reason to suppose any tendency towards institutional efficiency. Knowledge problems are the occasion for inefficiency itself, but subjectivism prevents them from simply being economized away. I would not go so far as to claim that an objective logic of action *cannot* account for inefficiency, but must confess to my ignorance of any theories that pass the test.

2.6 Accounting for Inefficiency

I have argued throughout this essay that the standard economic toolkit leaves no room for inefficiency. Rational choice theory, after all, endeavors precisely to uncover the rationality underlying patterns of behavior. Before concluding, I wish to make two important clarifications. First, while rational choice theory is not sufficient to account for inefficiency, it is still necessary. Second, my argument is not directed at the substantive reasons put forward for inefficiency, but rather their theoretical elucidation. Monopolies, credible commitment problems, and incomplete markets can still cause inefficiency, only not through the channel of costs and constraints. I shall deal with each of these two clarifications in turn.

Economists can certainly go a long way with only the logic of choice. Even when appealing to exogenous factors as ultimate causes—endowments, preferences, technology, and the like—simply elucidating stable patterns of interaction is invaluable. Even with the broader logic of action, this task assumes paramount importance. Endurance is a salient feature of institutions, so inefficient institutions must still be incentive compatible. Explaining their perseverance requires rational choice theory, which remains the most powerful tool in all of social science.

Another way to take my argument is actually as a defense of old-Chicago, partial equilibrium analysis. As hinted at above, my critique applies to the Chicago school of today; the problems stem from endogenization. Extending the reach of rational choice is a noble task, but what are properly features of market institutions have been transposed

onto agents so that they apply in any context. Specifically, the ability to calculate costs and benefits with “shadow prices” entails efficiency in any sphere rather than an appreciation of institutional differences. The partial equilibrium approach might look like intellectual laziness, but in fact safeguards the theorist from conflating incommensurable epistemic features of institutions.⁸

The second point of clarification is the precise target of my critique. I have taken aim at the formal neoclassical theory of inefficiency, *not* at the substantive conditions which are said to generate inefficiencies. That is, I deny that incentives (e.g., transaction costs, externalities, etc.) or constraints can explain how inefficiencies exist. Only knowledge problems can. I do not deny that poorly defined or enforced property rights, imperfect competition⁹, or incomplete contracts can cause inefficiency, only that simple rational choice theory cannot tell us how.

The most substantial of these reasons is the absence of well defined and enforced property rights. The Coase Theorem depends on them; but so does the rest of the neoclassical account of exchange. If the inability to enforce mutually beneficial contracts is modeled as a constraint, then the feasible set of outcomes has been redefined so that efficiency reigns. But if property rights are treated as mitigating knowledge problems (i.e., Hayek 1960) then their absence would generate inefficiencies. Likewise, modeling predation absent knowledge problems reduces the possibility of expropriation to a fixed

⁸See Demsetz (2003) on Knight in response to Pigou.

⁹I do not deal extensively with competition, but simply point to Demsetz (1982) and O'Driscoll (1982), who show that, respectively, both the objective and subjective logic of choice leave no room for the inefficiencies of monopoly. From the perspective of the logic of action, competition is more dynamic, and freedom of entry is its only essential condition (Kirzner 1973). Barring freedom of entry bars potential profit discoveries, resulting in inefficiency.

(albeit stochastic) cost. Including knowledge problems isolates the real problem: creative, entrepreneurial predation.

Incomplete markets can also cause inefficiency. The problem with treating “externalities” as costs is that the Coase Theorem kicks in. But absent markets, the extent of a spillover cannot be measured. Even if individuals are altruistic, the cost they face cannot accurately include the full tradeoff. This highlights institutional incommensurability of costs: there is no Political Coase Theorem because of the absence of residual claimancy and economic calculation. The problem is not with the general theory of spillovers, but with treating them as monetized costs and benefits.

Making room for institutional inefficiency helps economics rise to Smith's challenge: why do imaginary lines—or even concrete walls—separating two otherwise similar areas generate such substantial differences in prosperity? It is clearly possible for the poor area to resemble its rich neighbor. Big bills must be laying on the sidewalk. Moreover, it allows for a more satisfactory answer to Reder's dilemma: what is the role of the economist? Since we have no reason to suppose a convergence to institutional efficiency, the economist can help point the way to institutions that tend to reveal more potential gains from trade. Gaps in institutional feedback mechanisms make room for the economist as a teacher of the principles of spontaneous order, so that costs that are unseen may become seen.

3 Emergent Politics and the Power of Ideas*

3.1 Organizations and Orders

F. A. Hayek's recognition of the spontaneous character of market order dispels any illusions of “social ends.” Markets emerge from and inform purposive activity; they are not themselves purposive. Hayek criticizes socialism and social justice on the grounds that they treat society as a purposive organization (Hayek 1973, 1976). Government—an organization—attempts to impose teleology onto a non-teleological system. But planned order is limited in scope; it cannot exceed the potential knowledge of an individual or small group of planners. Rather than “rationalizing” production, state planning displaces the global but dispersed knowledge of market participants with whatever knowledge happens to sit around a conference table. That dispersed knowledge of market participants coordinates the productive activities of multitudes, allowing maximal exploitation of the division of labor. The role of the liberal economist is then clear: to oppose policies that disrupt the spontaneous operation of markets and support policies that enable it.

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The advent of public choice economics throws a wrench in the Hayekian vision. Public choice treats politics as exchange (Buchanan and Tullock 1962), though not in a narrow sense of swapping property titles. Individuals come with their own purposes and projects into an interpersonal arena—be it the polity or the market—where scarcity and the division of labor generate, respectively, competition and cooperation. The polity is thus “catallactic,” albeit more like a barter economy than one with money markets. Many political enterprises coexist with their own distinct and often contradictory ends. The market sphere is non-teleological because it is home to enterprises with incommensurable, incoherent, and irreconcilable ends. But so too is the political sphere. In modern societies, the volume of government activity certainly overwhelms the possible content of an individual mind. The polity, like the market, is a spontaneous order.

Treating the polity as an order raises three problems with Hayek's story. First, the clean bifurcation between spontaneous markets and the governmental organization becomes blurry. Hayek's critiques of planning have intuitive appeal, but what do they mean when “intervention” means one order “imposing” on another? Second, there is no *prima facie* reason to suppose that one spontaneous order functions more smoothly than another. How is a decentralized market process any better at coordinating activity than a decentralized democratic process? Indeed, the contemporary turn in public choice has been to treat democratic and market competition isomorphically. Elections and auctions are equally efficient (Wittman 1995, Besley 2006). Finally, what is the role of the liberal

social scientist in an emergent polity? If policy is not an object of choice, how useful is social theory beyond its intrinsic merit?

Seriously tackling these questions requires an appropriate analytical framework, one that allows the economist to recognize the common features of political and market processes while not glossing their differences. Specifically, this entails common behavioral assumptions underlying institutional differences. And these behavioral assumptions must allow for processes in the first place. The standard neoclassical model of human behavior, which includes only choice, has proven ill-equipped for this task. Neoclassical agents are capable of precoordinating complex markets when money is a mere veil. Is it any wonder that, when dropped into models of politics, they manage to secure a timeless democratic efficiency?

The only perspective that will do is an entrepreneurial one. By allowing for human ignorance and creativity, side by side with incentives and choice, an entrepreneurial theory allows for a genuine examination of politics and markets alike *as processes*. It also puts institutional differences front and center. In the face of genuine ignorance, learning, and novelty, state-comparisons of markets vs. politics are not possible. There is no way to know, *a priori*, what sorts of plans will be attempted. The wishful conjectures of market and political entrepreneurs could take any number of forms. Instead, the theorist is forced to consider the institutional environment in which plans are made. Creative agents can try anything, but their efforts will meet the response of a *refractory reality* (c.f. Roberts 2002). Different institutions offer different epistemic access to that

reality. The relevant questions, then, are best categorized as comparative institutional ones.

Wagner (2007) pushes this entrepreneurial understanding of agency further than any other treatment within public choice. In addition to concepts made famous by Hayek, I use his framework as a starting point for my discussion below.¹⁰ Rather than treating the state as intervening *ex post* into equilibrated markets, Wagner treats *polities* and *markets* as coeval forums within society. Society itself is an interconnected ecology of enterprises in which market and political enterprises exist side by side. Both are comprised of purposeful and creative human activity. The difference between market and political enterprises is whether they are governed by private contractual relations across a medium of common property or they operate fully within the commons. This distinction is crucial, because it means that market and political enterprises will behave differently not based on any objective characteristics of “public” or “private” goods, but based on the institutions that govern decision-making processes concerning each. These two spheres are inextricably interwoven in a larger social nexus, but those institutional divergences make all the difference.

The purpose of this essay is to get at a fundamental distinction between markets and polities that bears import for our understanding of their operation and interaction, as well as the role of the liberal social scientist. My starting point is to distinguish between

¹⁰Some slight modifications are made to the framework as presented in Wagner (2007) due to concerns I raise in my review of the book (Martin 2009) and in line with conversations with Wagner. Specifically, Wagner (2007) uses “market” and “state” as forums of action, whereas here “polity” is used to denote the sphere that coincides with the commons, while the state is understood as a hierarchically organized network of enterprises that exercises legal dominion over the commons (including, most importantly, barring entry to rivals).

environments that provide tight epistemic feedback and those that provide only loose feedback. This essay makes two main arguments. First, markets offer agents far tighter feedback than do polities. Second, this entails that ideas—our mental models of the causal properties of an environment—matter far more in polities than in markets. Before making these arguments, however, I must flesh out my understanding of environmental feedback and how it applies to social order generally.

3.2 Feedback and Embedded Agency

3.2.1 Tight and Loose Feedback

Systematically successful plan execution requires that agents' conjectures significantly correspond to the environment in which human activity is situated. Such correspondence can be the result of feedback from an agent's environment which can take one of several forms: *ex ante* signals on which to base forward-looking action, *ex post* selection mechanisms to sort out successful strategies, or—most commonly—some mix of the two. From the perspective of action, different systems of causal connections each constitute an “environment” insofar as they affect the success of certain types of plans. Though distinct, these environments may be interrelated and overlapping. Of particular interest is when one environment is emergent from other environments. Being emergent, the feedback mechanisms of one environment need bear no necessary resemblance to the mechanisms in its component systems, and vice versa. This basic property of emergence—irreducibility—can simply be cross-applied to the concept of feedback. It must inform any discussion of feedback in social systems.

The ability of humans to successfully interact with physical reality through sense experience is one such example of feedback from environment to agency. A red glow sends me a clear *ex ante* signal that touching a piece of metal would run counter to my usual plans. Term papers, after all, are harder to type with one hand. If I do touch a hot stove—perhaps not understanding the meaning of the red glow—I receive *ex post* feedback of an unpleasant sort. My ability to learn turns this experience into a selection mechanism. I avoid contact with hot stoves in my future behavior. There is a tight feedback mechanism at work here. *Ex post* experience feeds into our future *ex ante* interpretations.

But environmental feedback is not always so readily available. Consider the equally physical “disease environment.” The causal system by which man's plans are disturbed by disease agents offers far less feedback—both *ex ante* and *ex post*—than the hot stove. Microbes are invisible to the naked eye and may affect me only after a long and variable lag. Even armed with modern medicine I may get sick and not know where and how I contracted the disease. Disease environments offer relatively loose feedback.

A million potential questions present themselves when we acknowledge that different environments offer different feedback. The good questions, as stated above, are comparative ones. Many are bewildering. Most are far beyond my capacity to answer. What are the quantitative differences between feedback across environments? What sorts of knowledge do they provide? Are such comparisons across heterogeneous sorts of knowledge even valid? How might they be accomplished in a non-arbitrary way? An

attempt to systematically explore these questions could span decades and disciplines alike. I intend to focus instead on what appears to be a piece of low-hanging fruit: the power of ideas in an environment as a function of available feedback in that environment.

Of course, there are no shortages of definitions of the word “ideas.” The wishful conjectures of agents are a species of ideas. But those matter in any causal environment, and the whole exercise of comparative institutional analysis requires abstracting from or endogenizing such agent-level differences. For my purposes, *ideas* shall refer to an agent's mental models of his environment (e.g., his understanding of the system of causal connections that affects some subset of his plans). But this definition is not purely instrumental. I believe that these ideas are what teachers mean when they tell their students that “ideas have consequences” (*pace* Weaver 1948) or make references to “the power of ideas.” Though I focus on the notion of plan “success,” the models that constitute these ideas may be positive, normative, metaphysical, theological, inarticulate, inconsistent, or anything in between. Thus, they need not apply solely to consequentialist agents who would be interested only in prediction. The key factor is that they allow agents to evaluate the desirability of their plans.

My hypothesis is straightforward: *ideas matter more in the absence of tight feedback.* Consider the hot stove. A popular theory in ancient Greece was that physical objects possess their properties by virtue of indwelling *daemons*, or spirits. Hot objects are home to fire *daemons* just rivers house water *daemons* (Cornford 1957, pp. 96-8). Such anthropomorphic ideas seem quaint today. But their average adherent would doubtlessly

respond to a hot stove in a fashion identical to a modern physicist versed in the most mathematically sophisticated models of thermodynamics. The difference in their ideas simply does not manifest as a difference in behavior. I am *not* arguing that their ideas do not matter. Rather, I am arguing that as an environment approaches “perfect” feedback, the mental models that different agents hold in that environment will approach perfect substitution. Copernican and Ptolemaic sailors alike can make their way home. Relatively tighter feedback means that differences in ideas matter relatively less.

Conversely, consider the case of a loose feedback environment. Again returning to the ancient Greeks, physicians of the Hippocratic school famously taught that illnesses were caused by humors in the body. The balance of bodily fluids could explain everything from a cough to one's very personality (Sigerist 1961, pp. 318-326). A physician who swears by a fuller version of the Hippocratic oath, humors and all, would tend to a patient far differently than one armed with the germ theory of disease. Mental models matter a great deal in the absence of tight feedback. Pushing the point further, we can imagine two medical school classmates vociferously disagreeing on a diagnosis. In loose feedback environments even minor differences in mental models can engender substantially different diagnoses and thus strategies. Contrariwise, no one who burns his hand on a stove seeks a second opinion.

3.2.2 Social Environments and the Extended Order

With these preliminary observations laid out it is possible to turn to social science in particular. Does feedback from social environments bear more resemblance to the case of

disease or the case of the hot stove? Social reality is invisible, known only by observing its effects and engaging in rational reconstruction (Hayek 1952). But it is not the invisibility of social reality *per se* that creates difficulties. However invisible, what is social can indeed be subject to tight feedback mechanisms through direct interaction with others. For instance, language is an emergent social phenomenon. But speaking incomprehensibly will elicit a response that can help correct speech. Monetary exchange likewise is an inherently social phenomenon. But if I try to buy a sandwich with bills bearing my comely visage, I will quickly find them an inadequate means to finding willing exchange partners. Similar observations could be made about rules of just conduct. People by and large handle such facets of social reality with facility. This makes sense, because these facets only exist as constituted by intersubjective meaning: money is only money because we all attach the significance of money to it. These are what Hayek refers to as “motivating or constitutive opinions,” for the ideas themselves constitute the social phenomenon in question (Hayek 1952, p. 64). Insensibility of causal factors is thus a necessary but insufficient condition for positing weak feedback.

It is critical to distinguish between the “social” character of social phenomena and the *extension* of the social order. The extended order emerges from these lower-level social interactions. Being emergent, it need not share their feedback properties. Cooperating with my neighbors involves both social structures and immediate, tight feedback. Cooperating with the anonymous millions whose actions affect the success of my plans is quite a different matter. Even ignoring the invisibility of social relations, the sheer number of “underlying variables” that matter to my plans and their widespread dispersal

through time and space make their relatively immediate apprehension impossible. These variables are like germs, not heat: though imperceptible, they can mean the difference between life and death. It is their sheer number and vast dispersal, far beyond the ability of any one mind to grasp, that makes the extended social order—at least by default—an environment with relatively loose feedback. Adam Smith reminds us that man “in civilized society... stands at all times in need of the cooperation and assistance of great multitudes, while his whole life is scarce sufficient to gain the friendship of a few persons.” (Smith 1776, p. 26) Interactions with those precious few people we deal with face to face are subject to relatively tight feedback. But the vast nexus of multitudes more on whom we depend but will never know does not reveal its secrets so easily. Thus, Hayek distinguishes these speculative ideas about “the whole” from constitutive ideas, such as whether a green piece of paper counts as money (Hayek 1952, p. 64).

It would be a grave error to argue that such considerations only come to bear on the narrowly defined conception of economic coordination. How the social division of labor is coordinated to generate goods and services is still the best understood process that would be characterized in terms of an extended order, but it is not the only one. The extended order is shaped by political, legal, cultural, and economic activity alike. Both in and between these spheres, the actions of other individuals can either enhance or impede the success of an agent's plans. The activities of EPA bureaucrats affect the success of local politicians. Local politicians affect the realization of the EPA's objectives. Business plans affect and are affected by both the bureaucrat and politicians near and far. The interdependence of plans is not a narrowly economic consideration. Concomitantly, the

division of knowledge, “which is quite analogous to, and at least as important as, the division of labor” (Hayek 1937, p. 50) is a general feature of all spheres comprising the extended order. As Polanyi argues, “the co-ordinating functions of the market are but a special case of co-ordination by mutual adjustment” (Polanyi 1962).

I follow Hayek in treating the extended order in the singular. If this is troubling, consider it an analytical convenience. But it should not be taken to mean that the extended order is a singular environment for action (as defined above). Remember that an environment is defined relative to types of plans. In what follows I focus on two such types of environments: markets and polities. They constitute different environments because different institutions govern them. Thus, they grapple with the division of knowledge quite differently. I am not claiming that market and political enterprises rely on the same types of knowledge, though certainly there would exist some overlap. Rather, I compare them because they are the social environments which most clearly exhibit extension. They both bear non-extensive features (e.g., prices must be non-extensive but convey knowledge of extensive conditions), but the success of enterprises originating from either sphere depends largely on the activity of multitudes.

This is also not to say that success in markets and polities is *only* predicated on extensive factors. A plan of action can be situated in any number of causal environments simultaneously. Plans in the market and polity alike are subject to physical, chemical, and biological constraints on their success, not to mention non-extensive social factors (as will be the topic in Section 3.4 below). Thus, what I have to say about the differential

access of market and political enterprises to the conditions of the extended order does not necessarily cross-apply to other sorts of environments. I am not arguing that political enterprises cannot produce engineering marvels, only that political institutions coordinate the social division of knowledge less effectively than do markets.

3.3 Feedback in Market and Political Processes

3.3.1 Public and Private Enterprise

Having outlined the basic distinction between tight and loose feedback systems, I argue in this section that markets offer far tighter feedback mechanisms (regarding the extended order) than do polities. Agents in market environments are equipped with prices as *ex ante* signals to guide their conjectures and profits as *ex post* selection mechanisms to separate the wheat from the chaff. Combined with residual claimancy and transferrable ownership, these constitute a tight feedback mechanism whereby individuals adjust their plans to conditions of scarcity determined on a global scale. Polities lack these key institutional features as well as any close substitutes. Agents launching enterprises in the political sphere thus stand in the default state of ignorance regarding the contours of the extended order.

Positing differential feedback between markets and polities requires some analytical apparatus to assay their knowledge-generating properties. The standard economics of information (e.g., Stigler 1961) simply will not do because it homogenizes epistemic environments as well as knowledge. Agents simply accumulate knowledge until the

marginal cost exceeds the marginal benefit.¹¹ It thus rules out *ex hypothesi* deep epistemic differences between social environments, generating the market-polity isomorphism mentioned above. The only epistemic difference between social environments would be the degree to which costs and benefits of more information are internalized. These incentives are surely important, but not the whole story. Other approaches to information theory, which try to quantify the information passed along a given channel, may allow for different environments to pass along different quantities of information (Mirowski 2002). But this approach too necessarily homogenizes all knowledge in order to arrive at a quantity.¹² Mental models themselves are part of our question, not merely the data that gets plugged into them. My purpose is also to get at the quality of ideas and their *ex post* selection, which necessarily entails a concern with more than just raw data. For these reasons—and to satisfy the the concern for coping with novelty expressed above—a more intuitive, verbal approach seems best. Unable to quantify the knowledge-generating properties of markets and polities, an “explanation of the principle” must suffice (c.f. Hayek 1964). The inherent limitations and imprecision of this method are compensated for by its modest aim: a mere comparison of feedback mechanisms rather than a point prediction. Are market enterprises or political enterprises subject to tighter environmental feedback from the extended order? To answer this

¹¹One reason to find Stiglerian information theory lacking is that what we find out is not always what we would most like to find. Bad thermodynamics has caused fewer deaths by heat than bad medicine has caused deaths by disease. This is due to a difference in available feedback, not a difference in relative benefit.

¹²Without real parameter estimates, this sort of formalization would be nothing more than proof by assumption. But there are seemingly insurmountable problems in empirically estimating information transmission in markets vs. government: how do you measure the information? How do you decide which knowledge is relevant, when that itself is an outcome of the process?

question, I consider the differences between Kirznerian entrepreneurs and Tullockian bureaucrats.

Why entrepreneurs and bureaucrats? Surely the former are largely esteemed, the latter reviled. Is this not a rigged and obviously ideologically motivated setup? I submit not, but rather that this approach is the best first approximation for dealing with creative agents and genuine knowledge problems as they operate in both politics and markets. Richard Wagner (2007) lays out the basics in his reformulation of public finance theory from an emergent orientation. The plans of creative agents—their wishful conjectures—are projected into the social world in the form of enterprises (roughly, Hayekian organizations).¹³ These enterprises may be either public or private, depending on the institutional environment in which they are situated. They are also conjunctive and coeval—they coexist and interconnect—rather than sequential (as in traditional public finance theory, wherein the state operates to alter a preexisting market distribution of income). The two spheres overlap and interpenetrate one another, and society as a whole is characterized as an emergent ecology of both state and market enterprises.¹⁴

What distinguishes market from state enterprises is whether they are organized within an institutional framework of private property or of common (or public) property. Private property is characterized by individual autonomy, that sphere in which a person need not

¹³Of course, one historical organization may be a composite of several enterprises, which are distinguished teleologically. At this level of abstraction, the distinction can largely be ignored, but see below on differences in feedback between corporations and sole proprietorships.

¹⁴In Wagner's framework, market-based enterprises include non-profits (Wagner 2007, p. 28). Private property is the relevant and sufficient criterion for distinguishing market and state enterprises. In what follows, I further subdivide enterprises according to the kind of projects they are engaged in (production vs. consumption, for example).

gain the approval of specific others in order to undertake an enterprise. Relationships are contractual and entry is free. This institutional framework is the usual domain of economic analysis,¹⁵ but remains woefully inadequate for analyzing the borders between market and political processes:

The pure theory of a market economy and private property is a tale that is woven around property-governed relationships among solipsistic creatures. All objects of ownership are partitioned among people, and those people relate to each other contractually. In this formulation, the objects of economizing action are limited to things. Yet our social character affirms that people and relationships are also objects of economizing action. Our social nature surely places some limit on the domain of private property because what is proper etiquette is ultimately socially adjudicated, and property is a form of etiquette that speaks to propriety in personal conduct. This social nature, moreover, by no means implies harmony because conflict is also a social activity. (Wagner 2007, p. 43)

The commons, that institutional sphere which political activity inhabits, is characterized by “the absence of forbearance regarding individual conduct” (*ibid.* p. 52).¹⁶ Both spheres always coexist: private property always operates through a medium of public property. After all, property rights themselves, as noted in the passage above, are inherently defined within the commons. But their close relationship in no way implies a lack of distinction. Enterprises organized according to private property—including market enterprises—are constituted by relationships *across* the commons, while public enterprises—including state enterprises—are organized *within* the commons. The boundary between the common and private property of course varies from one society to the next, itself being a product of interaction.

¹⁵Including that which falsely analogizes polities to markets.

¹⁶This definition seems isomorphic to Jouvenal's (1963) distinction between activities that are merely incompatible at the level of the individual and those that are incompatible at the level of the set. When individuals perceive the latter to hold, the activity necessarily becomes situated in a framework of common property. For instance, an individual's religious practice may be considered a private matter in one society; one individual may serve God and another Mammon with no contradiction. But freedom of religion may appear incompatible with being a “Christian nation,” making one's religious practice the object of others' activity.

This brief synopsis of how state and market enterprises are distinguished is necessary to dispel potential misunderstandings of my meaning. I am arguing for neither an analytical nor an actual reduction of political relationships to market relationships. Political arrangements may vary radically from one society to the next, but a medium of common property always connects spheres of individual autonomy. Nor am I arguing that private property-governed relations can accomplish *any* end with more facility than political relations. Some enterprises are inherently social, in that they eschew forbearance on individual conduct. And, as mentioned above, the extended order is not the only causal environment in which market and state enterprises are situated, and one can probably argue that there are many situations in which it is not the normatively relevant one. What I am arguing is that the institutional arrangements governing market relationships allow much tighter feedback from the conditions determining plan success on the extended order. And while the worthiness of the ends that feedback allows individuals to pursue is of course a value judgment—as is the worthiness of ends effectively pursued by state enterprises—I submit that the tightness of that feedback is a purely positive matter.

But why bureaucrats? Should I not be comparing market entrepreneurs to political entrepreneurs, perhaps plucked from a theory such as Jouvenal's (1958) or Dahl's (1961)? The political entrepreneur, after all, would be the originator of the wishful conjecture in the polity. Such a comparison might serve many fruitful purposes, but I posit that it would not deal head on with the problem of creative agency in the extended order. To treat agency as truly creative, it is exactly the wishful conjecture on which the analyst must remain silent. Creativity cannot be anticipated. As argued above, what matters is

the environment into which those wishful conjectures are projected. Wagner's framework provides a tractable starting point by identifying the enterprise as a mode of conjecture-projection common to both markets and polities. In either sphere, a plan that interacts significantly with the extended order will be attached to some organizational form. For market enterprises, that means a firm. For political enterprises, it means a bureau. Either an existing bureau will have to administer the plan or a new one created to carry it out. What I am concerned with is how these different types of enterprises, corresponding to different institutional environments, provide access to feedback from the extended order to those whose conjectures are attempted (or to their stewards). It is also crucial to remember that, since the environment in question is the extended order, the relevant conditions that affect plan success are constantly changing. The ability to respond to these changes will be a function of environmental feedback rather than the idiosyncratic quality of an entrepreneurial conjecture. “[W]hen we study a social system, we have to focus on the method of mutual coordination among the individuals, and not on the intelligence of the average individual, in order to determine the system's social intelligence” (Lavoie 1985, p. 28). It is the doing, not the imagining, that must be compared. Hence the bureaucrats.

It is for this same reason that I chose these two particular models: Kirzner's entrepreneur and Tullock's bureaucrat. More than alternative theories, these two models of agency treat knowledge problems as institutionally situated. Kirzner's entrepreneur is far more dependent on his institutional environment than any of his theoretical competitors. Entrepreneurship is a part of all action, but the entrepreneurial arbitrage process by which

plans are coordinated depends entirely on market institutions of prices, property, and profits. Other theories of entrepreneurship ignore this institutional dependency, and are thus less useful for comparative institutional analysis. The case for Tullock's bureaucrat is even more straightforward. Other models of bureaucrats simply ignore genuine knowledge problems, whereas Tullock's "Virginia school" approach includes Austrian-style knowledge problems (Mitchell 2001).

In addition, the comparison between Kirznerian entrepreneurs and Tullockian bureaucrats allows for the sharpest possible contrast. Crucially, this approach allows for the construction of a spectrum useful beyond but one comparison. The distinction is between "tight" and "loose" feedback, not perfect knowledge and absolute ignorance. Nonetheless, the stark contrast developed below provides the endpoints of a spectrum between tight and loose feedback, two possible forms of which appears at the end of this section.

3.3.2 Kirznerian Entrepreneurs

Israel Kirzner's theory of the market process can best be summed up as: Misesian entrepreneurs solve Hayekian knowledge problems (Hayek 1945, Mises 1949, Kirzner 1973). The knowledge problem to be solved is the coordination of the division of labor. Economics 101 teaches us the principle of comparative advantage, that the possibility of gains from specialization and trade exist wherever individuals have different opportunity costs of production. But exploiting these potential gains requires correctly identifying least cost producers and methods of production. Further complicating the problem,

relative scarcities constantly change due to changes in technology, shifting preferences, and supply shocks. Lacking direct apprehension of these scarcities and their relative magnitude, agents in an extended order need some way of coordinating their activities. Relative scarcities are the refractory reality against which the conjectures of market actors must be tested.

Market prices reveal relative scarcities. A willingness to sell at a low price indicates a low opportunity cost. But this is true even in a barter economy. The unique feature of money is the ability to compare the scarcity of heterogeneous goods and, most importantly, heterogeneous bundles of goods. Advanced material production that exploits the division of labor requires combinations of intermediate goods. Money prices for these goods allow entrepreneurs to add up outlays of different production plans to arrive at a better picture of the opportunity cost of various modes of production. Mises (1920) famously argues that this requires a market in capital goods. Markets create the prices which allow for calculations of profitability, providing an *ex ante* signpost towards exploiting the gains from trade. The idea for the production plan itself must originate from the entrepreneur, but must be compared to conditions on the market to test its feasibility. The entrepreneur is “the first to understand that there is a discrepancy between what is done and what could be done” (Mises 1951). But entrepreneurs rely on price signals. By recognizing and arbitraging profit opportunities they bring prices more fully into correspondence with relative scarcities.

Present entrepreneurial conjectures may appear sound given present prices but prove otherwise when goods hit the shelves. In the face of constantly changing conditions, forward-looking price signals alone may not be sufficient to constitute a tight feedback mechanism. Production always takes time. Ergo, perfect adjustment is never possible. This is where *ex post* selection mechanisms play a crucial role. At any given time, it is no random sample of entrepreneurs making guesses about how to best deploy scarce resources. The wealthy can gamble with more resources than the poor. Those currently deciding how intermediate goods ought to be deployed are drawn largely from those who have been successful at deploying them profitably in the past, meaning that the average quality of their conjectures is probably higher than the population mean. Current prices reflect the best guesses of the most able entrepreneurs (Kirzner 1985, 1996). Thus *realized* profits, rather than merely expected profits, add to the feedback quality of the market (Alchian 1950). This mechanism of course relies on residual claimancy: the able entrepreneur must actually accumulate wealth.

The institution of transferrable ownership (i.e., private property) also underpins these *ex post* mechanisms. Transferrable ownership allows those who believe they know a better use for durable production goods to make a tender offer, with residual claimancy providing a bulwark against cheap talk (Wagner 2007). Conjectures of market participants are thus subject to a real-time filtering process which tests their ideas against the knowledge of relative scarcities dispersed through the economy. The conjunction of these *ex post* filters with *ex ante* price signals is what constitutes an intricate and tight feedback mechanism.

3.3.3 Tullockian Bureaucrats

Politics lacks the institutional trappings to facilitate such tight feedback from the extended order. The absence of transferrable property rights precludes money prices, profit calculations, and residual claimancy. Like market enterprises, political enterprises begin with a wishful conjecture of how things could be different than they are. Unlike markets, polities sport no automatic adjustment process to guide and select those conjectures in accordance with the refractory reality of the extended order. The argument here is straightforward: the knowledge-generating properties of the market process are ultimately dependent on the institution of private property, which, by definition, is absent from political enterprises. But mere absence of feedback is not all. Bureaucracies not only lack the ability to align knowledge and incentives with the shifting conditions of the extended order; they also—relative to their stated goals—systematically generate perverse incentives and select for ineffectual knowledge.

Mises (1944) cross-applies his argument concerning the impossibility of socialist calculation to bureaucracy. Bureaucrats suffer from a miniature version of the calculation problem faced by socialist planners. Bureaus that exist side-by-side with market enterprises have some access to the knowledge generated by markets, which Wagner (1998) has called “parasitical pricing.” But this is only for inputs. Their output is not itself priced, meaning that while costs can be added up, potential profits cannot. That critical ability of monetary calculation to make comparisons between different plans remains unrealized. Measurements of technical efficacy can always be concocted, but

bureaus lack any clear metric for determining *ex ante* the relative worthiness of different plans. Prices enable them to measure costs as an *ex ante* signal, but without the concomitant ability to tell whether an extra cost is worth incurring.

Of course, the inability to calculate expected profits goes hand in hand with the inability to realize actual profits. Bureaus lack the residual claimancy that provides such a powerful *ex post* check on wishful conjectures in the market. There is no automatic selection mechanism giving control of more resources to those best able to grasp the conditions of the extended order. Without transferrable property and given their unique legal status, those who feel they could do a better job than existing bureaus in realizing the ends they strive cannot make tender offers for their assets. Relative to market enterprises, the impossibility of takeover deprives political entrepreneurs of an important feedback signal. And, perhaps most importantly, bureaus are funded by tax revenue. The power to tax means that there is no built in check whereby those with bad ideas lose the resources that allow them to try out those bad ideas. Satisfying customers does not directly translate into survival, and even if rival enterprises are permitted they must compete with the bureau's access to the public purse. All of these features of public enterprises entail that—as opposed to an institutional environment characterized by private property—the wishful conjectures of political entrepreneurs will be subject only to loose feedback from the extended order.

Political enterprises exist within the broader emergent ecology of enterprises that comprises the extended order. Because that extended order is emergent from the

interactions between individual enterprises, it is important to remember the key feature of irreducibility. The extended order offers—by default—only loose feedback. But this is not to say that only loose feedback exists in politics; the extended order may not offer tight feedback to political enterprises, but its component parts do. The problem is instead that, where there is tight feedback in politics, it runs contrary to aligning plans with the contours of the extended order. Arguing that bureaucrats do not have access to dispersed knowledge of extensive changing conditions is not sufficient. In order to understand how they operate, it is necessary to consider what feedback bureaucrats *do* have. Mises argues that bureaucracies do not enable calculation in the way markets do, but it is the work of Tullock (1965) that examines what they do enable.

Bureaus are typically entrusted with some task that engages and attempts to alter in some way emergent patterns of private interaction. But the tight feedback they receive only corresponds to the day-to-day activities around the office. Those aspects of the polity are non-extensive and thus imminently knowable. As argued above, *non-extensive* social environments can provide tight feedback simply from face to face interaction. Even a well-intentioned bureaucrat cannot remain informed about changing conditions around the globe that affect the organization's plans, but he can participate in everyday social interaction with his office-mates. Tullock emphasizes the hierarchical nature of these relationships. Of course, hierarchical relationships exist in market enterprises, but organizational forms on the market are as subject to the tests of profitability and calculation as any other aspect of a business plan. Not so in the polity. Bureaus are hierarchy gone wild.

The hierarchical organization of bureaus sharply limits their ability to usefully gather and deploy knowledge. The information that bureaucrats at the top have is a miniscule fraction of what is scattered through the bottom tier. Each superior has several inferiors, so the inferiors must condense the knowledge they have when making reports. This process continues up the chain until enough knowledge is squeezed out that it can fit in one or a few minds. But it is not mere data that gets passed up. Sorting and interpreting the data into “takeaways” and “punchiness” is a critical part of the process. Since interpretations get passed up the chain, by the time they reach the top they are interpretations of interpretations of... and so on. Tullock calls this the problem of “whispering down the lane,” pointing out that even simple messages interpreted by sympathetic agents can become mangled beyond recognition as they pass from one person to the next. This process can be further exacerbated when different bureaus or subdivisions of bureaus have conflicts of vision, each one fighting for its own interpretations of immensely complex situations (c.f. Coyne 2007). Even with a legion of data gatherers and analysts, this process has no hope of keeping up with changing conditions in a system with the sheer scope of the extended order.

Without a bottom line, input prices for bureaucratic production processes can only be used for cost-accounting. If this meant minimizing outlays, it would still be a distant second best to true profitability calculations at mobilizing dispersed knowledge. Sometimes higher costs are worth incurring because they promise a greater return (i.e., opportunity cost can diverge from accounting cost). Due to the feedback they do have access to, bureaus cannot even live up to that standard. Following the signals available to

him leads the bureaucrat to maximize budgets rather than cut costs. From an *ex ante* perspective, a bureaucrat cannot see the opportunity cost of the resources he wastes. Those are borne in a decentralized fashion by taxpayers. But he can look the colleague whom he has to fire in the eye because he failed to secure a large enough budget. Even the most public-spirited civil servants do not want to fire their coworkers.

Reinforcing this tendency is an *ex post* filtering process. Whereas standard public choice theory simply assumes that bureaucrats are self-serving budget maximizers, Tullock offers a selection story. Markets punish cheats and frauds by denying them future transactions. The ambitious must rise by offering services to customers or employers. Free from competition, bureaus have much less reliable checks against this sort of behavior. Echoing Hayek's argument of "why the worst get on top" (Hayek 1944, Ch. 10), Tullock argues that the immoral man will rise in a hierarchy simply because he is willing to do everything the moral man is and more. Those with an eye toward career advancement will take actions to advance their careers rather than the ends of the organization. The result is that those who most want to carry out the organization's goals will drift toward the bottom. It is precisely those who have the most authority that were willing to do the most to get it. Again, it is the lack of a residual claimant that allows this natural pull of hierarchies to go largely unchecked.

Of course, I have not mentioned the external checks that bureaus face. Contemporary political economists frequently assert that elections effectively check the excesses of public enterprises (Wittman 1995, Besley 2006). There is indeed good reason to suppose

that opportunism is at least somewhat curbed by congressional oversight of bureaus, with congressmen in turn subject to the oversight of the electorate. But to argue that these checks operate with anything like “efficiency” is to treat politics as if they really had residual claimancy (Martin and Wagner 2009). Surely bureaus with democratic oversight are far less corrupt than in dictatorial regimes. But regardless of how well opportunism is curtailed, what these theories lack is an explanation for the efficacy of oversight in securing feedback from the extended order. With regard to the Hayekian knowledge problem, democratic oversight is only as effective as the ability of elections to aggregate knowledge about the extended order and for the congressional committee process to communicate that knowledge in turn to the bureaucrats. The final section of this essay will deal somewhat with that possibility, though a detailed investigation is well beyond the scope of this essay.

3.3.4 Intermediate Enterprises

With the relative position of these two points defined—private enterprises having tighter feedback from the extended order than public enterprises—it is perhaps valuable to briefly sketch a broader portrait. The analysis thus far has hinged on the difference between private and common property. But in assaying the relative position more than two notable landmarks in the relevant space, differences of degree will shed more light than differences of kind. The relevant metric is the ability to utilize economic calculation. This is not abandoning the importance of the distinction between public and private, but rather expanding on the logic why private property matters in determining the

strength of feedback from the extended order. Economic calculation is the substantive mechanism by which enterprises organized in an institutional framework of private property receive tight feedback, but this is not to say that all private activities or organizational forms are equal in this regard. Finer distinctions can be made. Here I lay out two possible continua based on this metric: the first in terms of types of activities, and the second in terms of organizational forms.¹⁷

Why the focus on economic calculation? As stated above, the interdependence of plans is a facet of social processes in any sphere; those plans (or aspects of plans) which can be coordinated by the price mechanism certainly do not constitute the whole of social coordination, even with special regard to the extended order. In particular, two other sorts of mechanisms for coordinating *extensive* activity spring to mind. The first is general institutions or rules themselves, which serve as focal points for coordinating potentially divergent expectations. However, what is unique about the price system is that it transmits feedback regarding the *constantly changing conditions of time and place* in a worldwide division of knowledge. Institutions are, by necessity, relatively static. They are a critical part of the division of knowledge but do not concern day to day changes in conditions:

In fact, the collaboration of individuals under common rules rests on a sort of division of knowledge, where the individual must take account of particular circumstances but the law [AM: or any institution] ensures that their action will be adapted to certain *general or permanent characteristics* of their society. (Hayek 1960, p. 157, emphasis added)

¹⁷In constructing two diagrams along an identical vector, I am not asserting identity or comparability across the two. All I am concerned with is relative positions on each.

The second mechanism is simply communication technology itself, at whatever stage of advancement it may be. Much could be said about the differences between these modes of communication and prices, but one difference alone is sufficient for my (comparative institutional) purpose: these communication mechanisms are available to agents operating in any institutional sphere. Mass media reports on both politics and markets. Businessmen and politicians alike can pick up the telephone or receive an email. Absent any compelling argument as to how one institutional sphere or another utilizes these technologies, their influence should be held constant.

The other reason that ability to engage in economic calculation serves as an adequate independent variable with which to construct a continuum is the coexistence of the private and public spheres. In its strict original form, the Austrian argument against the possibility of socialist calculation assumes worldwide socialism (Mises 1920). This caveat is crucial. So long as socialist planners have outside prices for the factors of production to draw on, some amount of calculation is possible, however distorted. Likewise, even the most unwieldy of bureaus have access to price data. The feedback that political enterprises do have from the extended order comes from their interface with the catallaxy. Thus *loose* feedback, not its complete absence.

One other assumption from Mises' 1920 paper is also crucial: that there would exist in a socialist commonwealth a market for consumer goods. In Austrian economics, these are also known as *first order goods*. Producer's goods, or the means of production, are *higher order goods* (second, third, and so on). Important for our purposes is that markets

in producer goods are what enable profit calculations. Those calculations are the tightest form of feedback that I am aware of from the extended order. Privately organized enterprises unable to engage in such calculations with thus have looser feedback. With these distinctions and qualifications in mind, it is possible to assay the relative feedback of various sorts of activities:

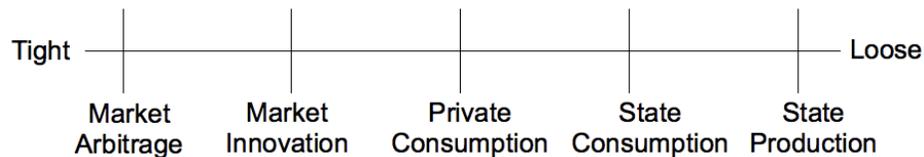


Figure 2: Feedback to Catallactic Activity

In Figure 2, the two leftmost points correspond to two theories of market-based entrepreneurship. “Market Arbitrage,” that form of activity with the tightest feedback from the extended order, is simply Kirznerian entrepreneurship. Kirzner's entrepreneur interprets price data to discover existing profit opportunities which are dissipated by his acting on them. “Market Innovation” corresponds to what goes by Schumpeterian entrepreneurship. Rather than recognizing an opportunity for arbitraging between a price difference in existing goods, this form of entrepreneurship involves creating a new good. Despite introducing a novelty into the catallactic nexus, this type of activity can still exploit economic calculation.¹⁸ The prices of substitutes can still be observed. This is true whether the novelty is a consumer good or of a higher order. While a going price for

¹⁸For this reason, Kirzner (1999) argues that Schumpeter's vision of entrepreneurship is sociological rather than analytic, and that his own theory more accurately captures the catallactic function of entrepreneurship. Innovation too is arbitrage. While it is an effective rebuttal to the claim that entrepreneurship can be discoordinating, it perhaps goes too far such that the line between errors and non-errors is drawn too much by an exogenous perspective.

the good would offer tighter feedback, the marginal introduction of a new good still benefits from profitability calculations.

“Private Consumption” occupies the middle position on this spectrum of activities. This category is meant to be quite broad, encompassing the private use of priced means toward any end other than monetary profits. This ranges from household activity to charity to academics, all of which use consumer goods for the achievement of non-monetary ends. Note that these are consumer goods, or first order goods, insofar as they are exit points from the nexus of catallactic activity, not because they are ends in themselves or are not productive in other senses. Prices for consumer goods do enable significant extended coordination. If a hurricane hits down the road and the price of strawberry pastries goes up, consumers outside the disaster area do adjust their consumption to the activities of those caught in the path of the storm. But they do not allow profitability calculations. Consumer good purchases are the outermost nodes in the nexus of monetized relationships. Their pattern is that to which the division of labor is coordinated. They are not guided by profit signals, but are the source of profit signals. Economization still takes place, but across values with no clear metric for deciding when an extra cost is worth incurring. Once again Mises (1920) was ahead of the curve here, pointing out that only higher order goods benefit from profitability calculations. The ends that first order goods serve are compared in kind. Access to prices enhances the feedback to these comparisons, but not sufficiently to reveal unambiguous opportunity costs.¹⁹

¹⁹This should dispel any potentially remaining illusions that I am positing feedback as some sort of normative maximand. The highest level of feedback is ultimately only ever feedback over means, not the ends that give those means their value.

The right half of the spectrum is where the transition from private to public property takes place. Like consumption activity, activity in the public sphere uses means with market prices (parasitical pricing). Just as with private consumption, these priced means give some access to feedback from the extended order without enabling profitability calculations. The difference is access to the public coffers. Price signals of all sorts require interpretation, and the incentive to achieve a given end with a smaller outlay is an important interpretive key. Absent that key the signal is distorted in its reception. Thus, as argued above, public enterprises cannot even engage in the second best kind of social coordination, outlay minimization. This is not to say that outlays will always be maximized, but rather that the tragedy of the commons will abrogate by some degree the feedback offered by consumer good prices.

But even given the tragedy of the commons—and here I proceed in an even more speculative fashion—it seems that some government activities are closer to private consumption in their nature than other activities. That is to say, they, like private consumption, are more like trying to utilize the fruits of the division of knowledge than to further enhance and coordinate the division of knowledge. Thus, perhaps it may be helpful to distinguish between consumption-like activities of government, which can use the feedback from consumer prices in similar manner to private consumption activities, and between those activities of government which replace or systematically attempt to alter production processes. These latter enterprises would include both regulation and production proper. When government intervenes at the periphery of the catallaxy, it displaces less knowledge than when it intervenes at stages of production of a higher

order. Intervention at a lower order may cause imputational adjustments through higher orders (Rothbard 2004, pp. 1161-3), but higher order interventions displace those adjustment processes themselves with looser political feedback mechanisms. Though speculative, this distinction seems plausible. It is hard to imagine that the Hayekian knowledge problem applies nearly as forcefully to a state-sponsored ticker tape parade than to nationalizing the steel industry (or even a given factory). Both enterprises can utilize parasitical pricing, but one displaces part of the very process by which prices transmit feedback.

A continuum of tight and loose feedback may also be used to compare organizational forms. Figure 3 depicts the extent to which a range of organizational forms approximate autonomous action guided by price signals. Deviations from these institutional prerequisites entail a loosening of feedback relative to idealized Kirznerian entrepreneurship:

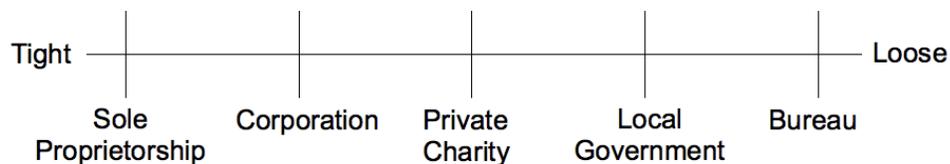


Figure 3: Feedback to Organizational Form

As with Figure 2, the two leftmost points represent private commercial activity. The sole proprietorship most closely resembles the Kirznerian entrepreneur, tightly linking control over resources and residual claimancy to the profits from their use. Given free entry, these businesses embody degeneracy down to the individual level and thus maximize

experimentation. The corporation, on the other hand, operates with a medium of common property at its heart. Shareholders throw their lot in with one another and with hired management. This is a deviation from perfect autonomy, however temporary and reversible. Still, the power of profitability calculations and freedom of entry (including the possibility of buyouts) offer powerful feedback to corporate enterprises.

That corporations may be internalize feedback from the extended order less effectively than sole proprietorships does, however, raise an interesting point. Maximal feedback at the individual level does not imply maximal feedback at the system level. Remember that emergence implies irreducibility. Even if corporations have effectively looser feedback than sole proprietorships, it does not follow that a system of all sole proprietorships will offer tighter feedback than one with a mix of both forms. In addition, as stated above, not all sorts of institutional or organizational frameworks permit the pursuit of all sorts of enterprises. A mix of organizational forms may expand the range of kinds of enterprises that have scope to be attempted, increasing experimentation and thus (potentially) system-wide, baseline feedback to all enterprises.

The middle position of Figure 3 is occupied by private charity organizations. More broadly, this may include any sort of private non-profit endeavor. These sorts of organizations sport autonomy and free entry without profitability calculations. In catallactic terms, their endeavors are a form of consumption, subject to the limitations noted above. They may, however, feature some form of reputational residual claimancy. And since they involve free entry there is scope for experimentation in how to achieve

different kinds of ends. Success can be imitated and donor funds must usually be won in competition with other non-profits, thus enabling a genuine social learning process (Hayek 1960). Still, as in household consumption, there is no unambiguous metric for success. Their environmental feedback thus lies somewhere between market enterprises and bureaus.

And again the rightmost part of Figure 3 is occupied by public organizations. Bureaus—assumed here to be at the level of the whole polity under consideration—offer the least amount of feedback. The intuition for placing local government to the left of national bureaus is straightforward. Local government enterprises in a federalist system are subject to greater competition than is the national government itself. This allows some experimentation and imitation at the local level. Their relative proximity to non-profits rather than bureaus may be influenced by their access to or reliance on funds from a more centralized organization in the polity. In addition, the mere fact that they are more local means that, even at their clumsiest, their more limited scope probably displaces less of the knowledge-generating market process than is possible at the national level.

One final point can be made before moving on: since feedback from the extended order decreases as one moves rightward along these continua, the importance of mental models should follow the same trajectory. Whereas the arbitrageur compares prices for existing goods, the Schumpeterian innovator must surmise which existing goods are substitutes in order to use price feedback most effectively. The effectiveness of non-profits may be more affected by social scientists' models of spontaneous order than are the activities of

private business, and corporate culture may have some real impact on organizational performance. I leave these ideas undeveloped, returning in the next section to a more dichotomous notion of public vs. private, in order to capture peculiar institutional aspects of how enterprises within the commons are affected by the power of ideas.

3.4 Politics and the Power of Ideas

3.4.1 Intersubjectivity and Ideas

Imagine the following situation: an ECON 101 teacher explains the basic process of market clearing whereby quantity supplied comes to equal quantity demanded. But troublemakers always sit in the back row. Perhaps in this case it is a meddling philosophy student. The student raises his hand and asks a most unexpected question: “What if some of the suppliers are Friedman students and the others are Keynesians?” The teacher, growing impatient, may repeat his previous analysis: at any price other than the market clearing price, there is an incentive for at least one buyer or seller to change his behavior. The price not only gives an incentive, it also sends a clear signal that a profit opportunity exists. The rest of the class nods in approval. But philosophy students do not thrive on acquiescence to magisterial authority. The reply comes back: “But what if the Keynesian does not think a disequilibrium price means that? What would he do then?” Most hypotheticals of this form, appearing in essays much like the present one, are constructed to challenge the conventional wisdom of the blackboard. The teacher is revealed to be missing a subtlety that the student has discerned. But not this hypothetical.

The student is wrong. The principles of ECON 101 are right. Markets offer tight feedback to agents within them, feedback that not only guides action (the profit signal) but also selects successful strategies (realized profits). Agents on the market are free to think they should buy high and sell low. But these agents will soon find that they have no more resources with which to flout the wisdom of their economics professors. This is not to say that ideas do not matter at all in markets, only that they matter relatively little because they tend to work themselves out. Very “thin” models will usually do when interpreting market signals: “buy low and sell high.” Successful ideas—at least those that are not based on peculiar conditions of time and place—can be imitated. In principle any number of accounting methods could be tried, yet a researcher would be hard pressed to find a successful firm that does not practice double-entry bookkeeping. Keynesian entrepreneurs will react to changing prices much the same as Misesian entrepreneurs. This is a fuller version of what economists mean when they argue that markets are *self-adjusting*. They offer tight feedback that guides plan formation and punishes those who will not play along. Just like hot stoves.

If we fast forward a few years, to the same professor's public choice class—assuming our philosophy major maintains his economic studies that long—his question becomes far more poignant. How does the Friedmanite politician behave differently from the Keynesian? In answering this question, it is important to remember one of the key insights of public choice: policy is the result of an emergent process, not an object of choice. Ideas do not translate one to one into policies in the same way they would for an individual. Politics is not purposive; but political agents are. In an intersubjective

process not unlike a barter economy, that is crucial. Political agents lack profits as a goal and clear metric for success. Ideas must supply the missing *ex ante* signals and *ex post* filters. In politics, rationales are important, both to individuals and between individuals.

On the individual level, ideas matter more in politics for precisely the reasons outlined in Section 3.2 above. Political enterprises lack tight, automatic feedback regarding the constantly shifting conditions of the extended order. Plan evaluation—insofar as the plan is nested in the social division of knowledge—must then rely more heavily on some sort of mental model. Is pursuing this end relatively worthwhile, given what must be sacrificed to attain it? Is there a better way of serving the same end? What other solutions might peacefully or even fruitfully coexist with this one? What are subsequently complementary projects? The relatively unambiguous summing of red and black ink answers these questions in the market process. But the most well-intentioned, well-informed, and creative of political entrepreneurs must rely on their own mental models to judge whether their plans have succeeded.²⁰ It is hard to argue that successful business enterprises have lured resources away from more highly valued uses, but economists still bicker about the efficacy of New Deal programs. But this individual reliance on mental models is not the whole of the story, for there are unique institutional features of polities that magnify and shape the impact of ideas.

²⁰What about votes as a metric for electoral success, or discretionary budget for bureaucratic success? Indeed, such metrics undoubtedly come into play, but the point is that they reveal nothing about the effects of an enterprise in the wider extended order, only whether others equally reliant on mental models thought the plans were a good idea. Or even more realistically, that others thought the net package (prospective and retrospective) of plans the political agent is responsible for are superior to the alternatives.

Politics differs from the market process in that—at least in a democratic polity—the reasons for taking an action must be capable of adequate articulation and acceptance. When a lone entrepreneur is asked why he is deploying his capital in a certain way, he can answer, “Because I expect to profit, even if you disagree.” Or, more simply: “Because it is mine.” The politician who justifies his policies in this way will soon be out of a job. Tullock's bureaucrat faces not merely those above, below, or near him in the hierarchy: he also must contend with “spectators” (Tullock 1965, Ch. 4), individuals removed from his particular job but whose opinions matter for his career advancement. Within the polity more broadly, spectators are endemic. Spectators may exist *within* market enterprises. But in politics they also deeply affect the interaction between enterprises. They exert more influence not only because of the absence of tight feedback, but also by the nature of organizing activity within the commons.

Recall that the absence of forbearance regarding others' conduct constitutes the commons. Rather than respecting the autonomy of a demarcated private sphere, political entrepreneurship seeks to initiate or alter activities in the public domain or to change boundaries between domains both public and private.²¹ Wagner notes that these sorts of activities, usually involving forums such as courts or legislatures, are usually “activated by a complaint” (Wagner 2007, p. 47). Jouvenal's attempt to locate the elementary unit of political activity settled on instigation: “*A* tells *B* to do *H*” (Jouvenal 1963, p. 91-2). What these two (arguably parallel) explanations have hit upon is the centrality of public articulation to political activity. Presumably some limited forms of interaction and

²¹Privatization of a firm or industry, to be clear, would be an act of political entrepreneurship.

boundary disputes can take place without language, but in any modern setting it is safe to assume that political activity is inherently linguistic. Language has a double force in politics: one predicated on its inherently intersubjective nature, and another in that mental models are articulated linguistically. In autonomous action more intuitive models may do, but public activity requires that plans be evaluated in some explicit manner.²² In most all cases this involves Tullockian spectators. From this foundation one could go on to examine how various aspects of the democratic process—political parties, mass media, advocacy groups, etc.--embody the public adjudication of articulated reasons for engaging in an enterprise.

But how is this different from the arguments of modern public choice theorists, such as Wittman and Besley, that even bureaucrats are ultimately (and thus efficiently) subject to popular control? Martin and Wagner (2009) argue that these models assume a “deep-level” homogeneity in preferences over political outcomes which is entirely unfounded, especially when we think of politics as a spontaneous order. Equally important, I posit, is the argument developed throughout this essay: even where such agreement might exist, no political agents have direct epistemic access to variables that would reasonably lead them to or measure “goodness” in policy. In modern political economy models, voters are capable of directly observing (or indirectly inferring) the quality of governance as a scalar variable. This assumes they know the effects of a policy throughout the extended order. Contrariwise, I have argued that the reality of the extended order is far beyond any

²²NB: articulation implies neither coherence nor completeness.

man's ability to grasp. Markets aggregate and condense this sort of knowledge automatically. Politics, lacking money prices, does not.

Politicians of all sorts *are* subject to popular control. But that control itself is exercised by those who have *no greater knowledge* of the conditions of the extended order than do the politicians. Votes aggregate only information, not knowledge. The vaunted “miracle of aggregation” assumes that crowds know what they are measuring; their estimates of the parameter value merely differ. In a tight feedback environment that may be a reasonable assumption. But when dealing with the extended order, we must first discover the fundamental mental models that tell political agents what the questions (and therefore measures of success) are.

From a spontaneous order or process perspective, democratic governance may then have less to do with collective choice mechanisms and more to do with the multiplication of Tullockian spectators. This is not to say that collective decision-making (and its associated rational choice analysis) play no role in understanding political activity. Rather, as with market process analysis, the point of emphasizing public articulation is to show how the relevant options in such models are converged upon. Once we include public articulation, for instance, we see that mechanisms normally thought only to distribute information to voters—mass media, for instance—may have a powerful influence on underlying mental models. Since choice sets are defined within those mental models, there is no reason to believe that the political process consists predominantly in the effective provision of unambiguous public goods. Democratic

institutions subject political activity only to acceptable articulation, not objective social coordination.

3.4.2 Constitutional Ideas

Ideas adjudicate the validity of speech acts by political agents. The mental models that people have about society determine what sorts of arguments are valid or invalid when discussing policy options. Those mental models may be positive or normative, all-consuming or piecemeal, and are frequently contradictory. And to shape enterprises that interface with the extended order, they need not themselves have anything to do with the extended order. Ideas about natural rights or the environment can have a powerful influence on a policy debate without any actual reference to extensive social forces. But no matter their origin, those mental models form the space in which policy stances must be articulated. A conception of society as a family will admit the legitimacy of far different policies than a conception of society as a contract.

Taken to its limit, this approach implies that ideas are the ultimate constitution, for they set the ultimate parameters within which the political process works. Ideas serve as the hermeneutic by which a written constitution will be interpreted. This should not be taken to mean that ideas determine events in a simple or even predictable manner. Stressing that mental models come to bear constitutionally actually implies the opposite, because it leaves post-constitutional activity to other mechanisms. Constitutions constrain and structure, rather than determine, interactions between political agents. This is especially true when the ideas governing the polity are a piecemeal conglomeration of contradictory,

incommensurable, and incomplete mental models. But even a given mental model can give rise to any number of different political enterprises, whether sincere or opportunistic. The prescriptions of mental models, in particular, rarely translate one to one into policies.

Positing ideas as the ultimate constitution thus in no way undermines the importance of incentives in the formation of policy. As stated above, the incentives of political agents constitute part of the refractory reality of the extended order into which wishful conjectures are projected. But the originators of public choice clearly recognized that, absent a common denominator of value in money, *what* those incentives are is more ambiguous. Ideas do not override incentives, they generate them. This is especially true when we consider that mental models must also be deployed to determine whether an attempted policy was successful or not. Ideas adjudicate *ex post* evaluation as much as *ex ante* justification. Is the United States in a recession? Even if we agree that the notion of a “recession” has meaning apart from its political definition, answering this question requires deploying some sort of mental model that draws a meaning out of the extended order that does not present itself. Even the present conditions of social reality are not self-interpreting.

The best scholarly example of how ideas play out constitutionally appears in *Democracy in Deficit* (Buchanan and Wagner, 1977). It explores how a Keynesian vision of the economy framed the debate over budget deficits since World War II. The Keynesian notion of counter-cyclical government spending to mitigate the vagaries of the business cycle held sway both in political discourse and in formal documents, such as the

Employment Act of 1946. The triumph of Keynesianism embodied a *de facto* constitutional shift, making the federal government the steward of macroeconomic aggregate variables. Just as with other constitutional mechanisms, however, the prescriptions and predictions of blackboard models were removed from reality by at least two steps. The ordinary course of democratic politics generates the first disjoint: while cutting taxes and increasing spending during a recession is popular and electorally rewarding, tightening the belt in rough times is not. Political incentives drive a wedge between the prescription of the model and its actual implementation in a democratic polity. The joint operation of Keynesian ideas and electoral politics results in an ever-growing deficit. One consequence of this deficit is monetary inflation, which bypasses unpopular tax hikes or spending cuts. Inflation in turn results in the second, descriptive disjoint between the Keynesian model and the reality of Keynesian policy. In a model only concerned with aggregates the impact of inflation on relative prices is glossed. In the real world, these relative price effects disturb the tight feedback offered by market prices, generating wasteful misallocations of resources that may themselves cause business cycles. This analysis is helpful, not only because it demonstrates the power of an idea, but also the complex process it sets in motion within and between the polity and the market.

Policies do not converge to some common set, but rather evolve, are overturned, and (most commonly) accumulate as ideas about the social order change. As with the formation of sedimentary rock, a process operating by common principles does not imply that the resulting structure will be cohesive or coherent. Through this process, mental

models play a critical role. Yet—even supplemented with voluminous data gathering—they do not give real-time knowledge of the conditions of the extended order. Thus, even when new ideas are used to examine old policies, it is not the result of a tight feedback mechanism. The bottom line is: markets are self-adjusting, politics are not. Rather than being dissipated, divergences between the environmental conditions assumed in a political enterprise's plan and actual conditions tend to accumulate. Again, this is not a state of no feedback. Bad effects are often revealed sooner or later. But it is a situation of loose feedback. Sometimes consequences only become apparent at a crisis point, or constitutional moment.²³ Market enterprises adjust their activities from day to day. It takes a catastrophe for political enterprises to reevaluate their plans. Milton Friedman says it best:

Now, you never have real changes unless you have a time of crisis. And when you have a time of crisis what happens depends on what ideas are floating around, and what ideas have been developed, and thought through, and are made effective. And I believe the role that people like myself have played in the transformation of public opinion has been by persistently presenting a different point of view, a point of view which stresses the importance of private markets, of individual freedom, and the distorting effect of governmental policy. That may not persuade anybody, in one sense, but it provides an alternative when the time comes that you have a crisis and people realize that you have to change.²⁴

Ideas matter far more in politics than in markets. Entrepreneurs were being guided by invisible hands in 1775 as well as 1777, but politics was never the same after Marx. The market process requires only very thin mental models which are easily selected for. The political process is a slave to ideas. These ideas are projected into a refractory reality best characterized as a worldwide division of knowledge. The divergence of between

²³Note that with ideas, rather than formalized rules, constituting the constitution, these crisis points have less to do with interests being shocked (when did a revolution pay attention to vested interests?) and more to do with popular models governing political action breaking down.

²⁴From an interview for the series *The First Measured Century*, accessed at <http://www.pbs.org/fmc/interviews/friedman.htm>.

political agents' mental models of this reality and its true contours are revealed not day to day, but only at crisis points that result from accumulated errors. This may lead to a mental model being overturned, but there is no guarantee that the ideas which displace it will be any better.

3.5 Conclusion: The Role of the Liberal Social Scientist

Most economists have believed firmly in the power of ideas to shape the world, for good or ill. The vast majority have focused on the ability of economic ideas to influence policy.²⁵ Landsburg (1993, Ch. 14) refers to it as “the policy vice.” Given what has been argued above, this practice makes some sense. After all, what is the likelihood that an economist will revolutionize the way business is done? Probably far less than the chance of contributing to better policy. Where economists differ is in their interpretation of how ideas matter.

There are two dominant stories about the power of ideas. The first is summarized by John Neville Keynes (1893, Ch. 2). Keynes, attempting to clarify confusions within the broader economics profession, argues that there is an important distinction between the *positive science* of political economy and the *art* of political economy.²⁶ While the positive science offers explanations and predictions, the art of political economy offers practical precepts for accomplishing certain ends. Those precepts come from combining

²⁵Of course, there are economic forecasters, but their job is to try to guess at the future values of variables already deemed to be relevant according to a given business plan. That is quite different from plan formation, and relies on actual market signals.

²⁶I am not trying to pick on John Neville. I cite him because he (still) aptly describes the broad consensus in economics. He actually goes to some lengths to warn his reader about the dangers of overreaching with this “art.”

the findings of the positive science with an understanding of existing conditions to formulate policies. In the twentieth century, this belief took the extreme forms of scientism, technocratic fine-tuning, and even full-on socialism. This is by far the dominant story that economists tell about the power of ideas. It is completely wrong.

As I have repeatedly emphasized in this essay, the extended order does not, by default, offer tight feedback. The conditions of relative scarcity are known only through the proxy of market prices. How, then, is it possible to develop something so sophisticated as an *art*? An art requires some sort of knowledge of particular conditions. That knowledge may be tacit—such as in the art of making pottery—but it always relies on tight feedback. An art is something one learns by doing, which assumes that there are signals to follow during the activity in question and the errors are obvious afterwards. No matter how well-informed a policy-maker may be, his knowledge can never be anything but a small fraction of the factors that affect the desirability of his policies. There can be no such thing as an art of political economy.

The alternative vision is offered by James Buchanan (1996). He argues that economics is a “public science,” and that the didactic purpose of the economist is to teach the principles of spontaneous order so that citizens may become informed participants in their own democratic process. In other words, the economist's comparative advantage is help correct the mental models of the citizenry and point out the unfeasibility of certain schemes. It is not to decide policy as an engineer or “artist,” but rather to help define the space within which political rationales must be made. Since the extended order does not

offer tight feedback, these ideas will not assert themselves. The economist is not an artist who shapes the world into an aesthetically pleasing form. His role is far more roundabout. It is on the level of fundamental ideas, not concrete policies. Fundamental among those ideas are the frequently disastrous consequences of attempting to project constructivist conjectures in an emergent reality. As Buchanan says in his foreword to Tullock's *Politics of Bureaucracy*:

Man in the West, as well as in the East, must learn that governments, even governments by the people, can do so many things poorly, and many things not at all. If this very simple fact could be more widely recognized by the public at large (the ultimate sovereign in any society over the long run), a genuinely free society of individuals and groups might again become a realizable goal for the organization of man's cooperative endeavors. *We do not yet know the structure of this society, and we may have to grope our way along for decades.* (Buchanan in Tullock 1965, p. 10, emphasis added).

The liberal social scientist does not lay claim to an art for fixing society. What he knows is that it will take free people trying different things to improve the world. In addition to singling out the principle of spontaneous order, this view of the role of ideas in politics is consistent with the recognition that policy is emergent. Hope is here balanced with humility. Politics, in the long run, is not a slave to interests but to ideas. Real change is possible, but—consonant with liberal values—must be the result of individuals changing their own minds.

4 Critical Realism and the Austrian Paradox*

4.1 Introduction

Critical realism posits social ontology as a means of sifting wheat from chaff and putting a derailed economics profession back on course. By ignoring ontological considerations, the critique goes, mainstream economics unthinkingly adopts an implicit ontology ill-suited to its object. Economists inquire into phenomena widely regarded as “social:” exchange, markets, firms, money, business cycles, etc. But perpetual advance in mathematical and statistical sophistication has been bought at the price of wholesale omission of the most salient facets of social reality. Social ontology, at its most general level, seeks to understand what general features phenomena have by virtue of their being social.

Post-Keynesians have led the critical realist charge, but it garners interest and support from the whole sweep of heterodox traditions in economics (c.f. Lewis 2004A). From venerable traditions such as (old) institutionalism to nascent fields like evolutionary economics, critical realism has found willing partners in dialogue and debate. But of all heterodox schools, the Austrian approach has probably had the most bipolar reception

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among the realists. Beyond a doubt, the Austrian and critical realist critiques of mainstream economics share much in common (e.g., Boettke, 2002B; Lawson, 1994, 1997, ch. 1). Commonalities are frequently cited from both camps (Runde, 2001; Beaulier and Boettke, 2004; Lewis, 2004B, 2005). But tensions endure. Tony Lawson's seminal *Economic and Reality*, for example, contains two whole chapters dedicated to distancing his approach from that of Austrian luminaries Menger and Hayek (Lawson, 1997, chs. 9, 10; see also Lewis, 2004B, 2005, and C. Lawson, 1996).

Of course, the same might be said of the relationship between Austrian and mainstream economics. Aside from the Keynes-Hicks influence in macroeconomics, Austrians can rightly claim to be the closest of all heterodox approaches to the mainstream. Flipping open a mainstream or Austrian principles text reveals extremely similar language: choice, rationality, marginal utility, supply and demand, methodological individualism, economic law, etc. At the same time, Austrian texts offer frequent and vociferous critiques of the mainstream's formalistic methodology and its theoretical progeny, including the mainstream use of equilibrium, impoverished understanding of competition, and utility theory (e.g., Rothbard 1997).

The present essay endeavors to shed light on this bipolar set of observations by explicating and then disentangling what I call the Austrian Paradox. The Paradox is that Austrian economics embraces the central tenets of marginalism without abandoning a conception of social reality as open, structured, and intrinsically dynamic (cf. Lawson 1997, ch. 7; 2003, ch. 12; Lewis 2004C). The essay is organized as follows: Section 4.2

outlines the objections raised by critical realists to the implicit ontology of mainstream economics. Section 4.3 spells out the Austrian Paradox. Section 4.4 resolves the Paradox by appeal to the basic Austrian theoretical distinction between the logic of choice and the logic of action. Section 4.5 pushes the argument a bit further: I make the case that universal marginalism in the Austrian vein is indispensable for any social scientific discipline on critical realism's own terms. The realist conception of social structures presupposes incentive compatibility, the articulation of which requires the marginalist logic of choice. Section 4.6 concludes with observations on the potential fecundity of the Austrian take on critical realism.

Throughout the essay, I focus my attention on matters of substantive disagreement. It is not sufficient to merely point out that Austrians and critical realists alike are less mathematical than mainstream economists. Rather, the use of mathematics is only an issue to the extent that it involves ontological commitments at odds with the nature of social order. The focus is thus on the substantive differences in economic analysis rather than whether they are expressed mathematically or verbally. Likewise, I do not offer a detailed response to Lawson's criticisms of Menger and Hayek. Not only are those criticisms bound up with interpretations of the two thinkers which I do not share, but they also target the methodological writings of Austrians without understanding them in terms of the substantive economic propositions that Austrians put forward. Rather than interpreting methodological writings in a vacuum, they should be understood in terms of the economic theories of their authors. In actuality, Lawson's critique of Lionel Robbins

is far closer to a substantive dispute with Austrian economics, to which Section 4.5 below responds (Lawson, 2003, ch. 6).

4.2 The Impoverished Ontology of the Mathematical Mainstream

Any scientific method presupposes an ontology. The most basic features of an object of inquiry will determine, at least in part, the potential success of various methods of study. Ontological theorizing “underlabors” for individual sciences, helping to sift through appropriate and inappropriate modes of inquiry. No scientific endeavor, as practiced, is non-ontological; the only question is whether the underlying ontology is explicit and defended or implicit and undefended. Mainstream economics, by insisting on mathematical formalism and econometric verification (or falsification), follows the dominant scientific epistemology inspired by Hume. This epistemological stance assumes a closed social world populated by atomistic calculators rather than an open and structured world populated by interrelated agents.

Humean epistemology leads most economists on a wild goose chase after constant event conjunctions: propositions of the form, “whenever x, then y.” However tacitly, the insistence on mathematical modeling and econometric testing commits one to the search for actualized quantitative relationships between observed variables. What could be, is. What is observed must be the unique, exact outcome. Granting such inquiries exclusive rights to the mantle of science only makes sense in a closed universe. In such a reality, constant event conjunctions make quantitative prediction the *sine qua non* of any scientific endeavor. By contrast, the social world we actually inhabit is open.

Countervailing forces pose a real threat to the actualization of any potential relationship. Causal mechanisms thus operate *transfactually*: even where present, the outcome they tend to produce may be disrupted by other causal mechanisms, so that even necessary causal relationships may not be apparent or even actualized (see Lawson, 1997, p. 23). Even when their effects are not actualized and thus empirically unobserved, their operation cannot be ruled out.²⁷ The classic realist example is the leaf blown over a rooftop. Its physicality necessitates that it be subject to gravity, but countervailing causal forces may lead to quite contrary results without undermining our belief in the reality of gravitational pulls. Elucidating these causes, however invisible, becomes a central scientific task in an open universe.

The closed universe of constant conjunctions permits a radical form of reductionism, treating agency as atomistic and isolated (Lawson, 2003, pp. 13-16). Tractable equations need independent and dependent variables. Interdependence is anathema. Filling models with infinite agents or falling back on Nash equilibria ensures the absence of meaningful interaction between agents (Mirowski, 2002, pp. 331-349).²⁸ Firms are reduced to given production functions (i.e., conjunctions between inputs and outputs). Abstract math and statistical testing once again come together, for observations must be independent of one another. These methods are appropriate to a world of atomistic agents: given the

²⁷In the words of Roy Bhaskar, the leading critical realist philosopher of science: “Once we allow for open systems then laws can only be universal if they are interpreted in a non-empirical (trans-factual) way, i.e., as designating the activity of generative mechanisms and structures independently of any particular sequence or pattern of events” (Bhaskar, 1978, p. 14).

²⁸Lawson (2005) has pointed out that individual optimizing behavior does not universally characterize modern mainstream economics, which often treats groups in game theoretic environments. Regardless of the level on which agency is located, however, the mathematical methods of the mainstream still treat it atomistically.

behavior of other agents, the full consequences of their mechanistic responses can be treated in isolation. Any social phenomenon can be reduced to the movements of these atoms. But the real social world is populated by emergent structures whose causal powers are irreducible to the actions of their constituent parts. Moreover, many of these structures create positions that agents occupy which are “internally related” (Lawson, 1997, p. 164); the role of a teacher cannot be understood apart from that of a student, and vice versa. Agents interact morphologically—like chemicals producing a distinct compound rather than atoms bouncing off one another—generating emergent social structures rather than mere vector additions in some predefined space. These structures in turn recursively exert causal influence on agents and shape the way agents influence one another (Runde, 2001, p. 5; Lewis 2004C). Agency and structure thus constitute a “duality” (Lawson, 1997, pp. 169-70).

Having reduced all social phenomena to agent atoms, asserting the universal relevance of calculative rationality is but a small step to take for mainstream analysis. With social structures divested of any reality whatsoever, the burden falls on individual agents' cognitive ability to pre-coordinate patterns of social interaction. When it comes time to link such rationality with econometrics, the modeling solution should be obvious: make the agents' cognitive processes isomorphic to the very econometric techniques used to capture constant event conjunctions (Mirowski, 2002, pp. 274-86). With the behavioral assumptions thus loaded, any situation transforms into a market equilibrium. Barter and indirect exchange are identical, so money is a mere veil. “False trades” would alter the resultant pattern, and so error must be excised. Where real prices are not observed,

“shadow prices” will do. This, of course, opens up new vistas for economic modeling to explore. The more powerful economic agents have become, the more universal has been the application of calculative rationality and the logic of individual choice. Agents smart enough to clear markets are dropped into alternative “institutions” *after* the reality of those institutions has been assumed away. The result is a flattening of institutional differences in which every social process is treated isomorphically to a market.

Contrariwise, real world agency is embedded in institutional structures that shape (though not determine) it: the family is not a firm, a football game not a market. The human mind is not econometric software, so much of agency involves habitual rule-following, and mistakes are often made. While mathematical modeling may serve many useful purposes, it is a poor master. The rigid insistence on its universal applicability and exhaustive explanatory power has blinded economists to these fundamental features of social reality.

4.3 The Austrian Paradox

The triumphal march of mathematical economics begins in earnest with the onset of marginalism, culminating in the demand for universal formalism. This trend also leads to the identification of economics with the sphere of economizing activity and an insistence on the universality of rational agency and choice. But not all marginalists are mathematical, raising the motivating concern of this essay, what I dub the “Austrian Paradox.” Modern Austrian economics, while offering a critique of mainstream economics that shares much in common with critical realism, adheres firmly to

marginalist principles and uses much of the same terminology. It accepts the centrality of rational action, and claims of universality abound in Austrian texts. In these and other ways the school appears schizophrenic, especially when the full range of such paradoxical contrastives is laid bare.

Mechanistic conjunctive thinking may go back to Ricardo or earlier, but the radical mathematization of the discipline begins with the marginal revolution. With marginalism comes the calculus and the ability to formally emulate energy physics (Mirowski, 1989). Marginal utility and marginal productivity map cleanly onto derivatives. Equimarginal thinking furnishes convincing equilibria of astronomical stability. Walras and Jevons both set out with the express intention of creating a social physics (Beinhocker, 2006, pp. 29-36). But one branch of the marginal revolution consistently grows ever more divergent from the others.

Menger's marginalism stands apart from the physics envy of Walras and Jevons (c.f. Jaffé, 1976). All utility is marginal utility, making value theory about discrete objects of choice in time rather than slopes at some point along a function. A close look at Menger's hypothetical illustrations reveals closures to be local and contextual (e.g., the horse market in Menger, 1871 [1994], ch. 5). An object in one location physically identical to a consumer good at another is understood as capital, which can be turned into the relevant consumer good in combination with transportation and time (Mises, 1912 [1981], pp. 97-8). Various observable goods are thus related structurally and through time, meaning that the system remains open rather than grinding to a halt. Nonetheless,

the horse market clears: Austrians are still committed to the basic theory of supply and demand. Openness is thus juxtaposed with closure, however local.

Building on this foundation, Austrian catallactics takes both a conjunctive and a causal tone. Rather than a quest for exact relationships between observable variables, Austrians see economic reasoning as drawing out distinct chains of causality that underly and contribute to (not determine) observed phenomena (Kirzner, 1960, pp. 1-2, 165). Rothbard's price theory text references a distinction picked up from conversation with Mises that, aside from some semantic differences, could have come straight out of a contemporary critical realist text:

It will be noted that we have avoided using the very fashionable term “model” to apply to the analyses in this book. The term “model” is an example of an unfortunate bias in favor of the methodology of physics and engineering, as applied to the sciences of human action... The “model” of engineering... is a mechanical construction in miniature, *all parts of which* can and must coexist in reality. The engineering model portrays in itself all the elements and the relations among them that will coexist in reality. (Rothbard, 2004, p. 576, note 15; emphases in original)

This passage captures the Austrian animus against understanding the economy as a closed system of constant conjunctions. The proper method, by contrast, is to “draw out... the tendencies and causal relations of the real world” (*ibid.*). Austrians understand a demand curve as a graphical heuristic capturing the transfactual law of demand, not as a claim about a conjunctive relationship between price and quantity. As a result, Austrians are even more committed to the proposition that demand curves *always* slope down, for a demand curve is nothing but a representation of a single causal relationship derived from the law of diminishing marginal utility (see below). With this transfactual understanding of demand an observed conjunction of a higher price and higher quantity traded would be

properly understood as the result of a countervailing force. But while these laws imply far from constant relationships, Austrians do not hesitate to discuss conjunctive regularities shaped by those underlying laws:

Economics shows that there prevails in the succession and interdependence of market phenomena an inescapable regularity that man must take into full account if he wants to attain ends aimed at. Even the most mighty government, operating with the utmost severity, cannot succeed in endeavors that are contrary to what has been called “economic law.” (Mises, 1960, p. vii)

Austrians see no contradiction in asserting a universally valid formal logic of action, while at the same time maintaining its institutional embeddedness. Mises and Hayek, over the course of the socialist calculation debate, articulate the importance of property institutions in shaping agency. Mises (1920) asserts a categorical difference between socialism and capitalism, going so far as to argue that socialism implies the absence of “economy” entirely. In the ensuing controversy over market socialism, mainstream marginalists—loading the explanatory power of their models into behavioral rather than institutional assumptions—assert the formal similarity of market and market socialist equilibria (Boettke et. al., forthcoming). Hayek's reply insists that mathematical formalism clouds the issue by concentrating on an equilibrium state in which, by definition, plans are precoordinated (Hayek, 1937). Only by omitting the importance of private property institutions and freedom of entrepreneurial entry could the market socialists make their case (Kirzner, 1992, p. 39). Nonetheless, Austrians have consistently insisted that the formal logic of action always obtains, going so far as to name it the super-science of which economics is but a part. “[P]raxeology... claims for its theorems, within the sphere precisely defined by the underlying assumptions, universal validity for all human action” (Mises, 1949, p. 36).

Hand in hand with the centrality of action goes the Austrian insistence on individualism, but not of any atomistic sort (Lewis, 2004B, 368-9). There has always been implicit recognition of the causal efficacy of social structures, such as private property. Sometimes it is explicit: “A collective whole is a particular aspect of the actions of various individuals and as such a real thing determining the course of events” (Mises, 1949, p. 43). Menger famously explains the development of money as emerging from exchange relations between a multitude of individuals through time (Menger, 1871 [1994], ch. 8). Mises (1912) ascribes to this institution powers that are truly *emergent*, that is, irreducible to those of individual action or agents, for money prices enable economic calculation in a way that non-priced cost-benefit analysis does not. “Money has, in fact, played a role in economic activity, not merely as a passive tool, but also and active force” (Kirzner, 1960, p. 107). But recognizing the emergent powers of social structures in no way dilutes Austrian belief in methodological individualism:

Methodological individualism, far from contesting the significance of such collective wholes, considers it as one of its main tasks to describe and to analyze their becoming and their disappearing, their changing structures, and their operation. And it chooses the *only method* fitted to solve this problem satisfactorily. (Mises, 1949 p. 42, emphasis added).

Also concomitant with the universality of the logic of action is the universality of rationality, but not of the narrowly computational sort. Error and rule-following—ruled out by the lightning calculators inhabiting mainstream models—play important roles for Austrians. Rationality indicates simply conscious purposiveness; even actions based on beliefs wildly off the mark thus qualify as rational (Mises 1996, pp. 19-22). Qualitative error figures crucially in the market process, rather than the random distribution of errors around a real parameter value (Kirzner, 1997, pp. 12-15). Hayek pioneered the concept of rule-following in modern economics as well, arguing that ignorance means that rules can frame choices as well as overcome problems of indistinguishable cases. Moreover,

rationality does not flatten institutional differences, for some institutional forms are preconditions for some kinds of action. Rational calculation is impossible under socialism. Nonetheless, “Austrians are firmly within the rational choice camp of social science” (Boettke, 1994, p. 603). Rationality may manifest differently in different institutional settings, but it is always manifest in action. “Action and reason are congeneric and homogenous.” (Mises, 1949, p. 39).

Table 2: The Austrian Paradox

Austrian analysis is...	but also...
Universal	Institutional
Individualist	Emergent, intersubjective
Marginalist	Open, process-oriented
Rational choice theoretic	Admits error, rule-following
Conjunctive	Causal

Austrian economics stands with one foot each in the mainstream and heterodox traditions. The school invokes marginalism, universality, individualism, and rational choice. Paradoxically, it has simultaneously been a standard bearer in the wider profession for attentiveness to institutional embeddedness, emergence, error, rules, and diachronic processes. To mainstream and heterodox economists alike, the school must appear schizophrenic: markets clear, but errors abound; beliefs and knowledge are central, but rational choice applies universally.

In making this claim, a crucial distinction must be drawn between universal and exhaustive explanations of social phenomena. A universal explanation applies across the whole range of social reality. Whatever social phenomenon is at stake, it is relevant in

some measure (see Section 4.5 below). Alternatively, an explanation may exhaust any of a range of social phenomena, leaving nothing to be accounted for, but not necessarily touch on others. This latter mode has steadily come to dominate economics, led by the search for constant event conjunctions and Robbinsian maximization.

With a given framework of ranked goals sought, and of scarce resources available to be deployed, rationality (in the narrow sense of consistency of behavior with the relevant given ranking of ends) assures a unique pattern of resource allocation; decision making can be fully understood in the light of the given means-ends framework. There is no part of the decision that cannot be accounted for. (Kirzner, 1982, p. 143)

Economists have progressively applied their theories to one arena of social life after another, even the preferences underlying choices (Stigler and Becker, 1977). The phrase “inferring intentions from outcomes” aptly captures the exhaustiveness of this endeavor (Wagner, 1989, p. 47). By contrast, Austrians eschew exhaustiveness on two fronts: the instrumentally rational choice is not the whole of action, nor does the logic of action exhaustively describe any social phenomenon, even markets (Kirzner, 1960, p. 87; Rothbard, 1997, pp. 38-9).

Marginalist logic *by itself* has no room for openness, internal relations, or recursive social structures. Critical realists and Austrians agree on the importance of these facets of social reality, and that human purposiveness defines the boundaries of what is “social” (Lawson, 1997, 30-2; Hayek, 1957 [1969], p. 241). Social structures, not to be reified, only exist *in action* (Lawson, 1997, 169; Mises, 1949, pp. 41-3). Therefore, there must be some entry point for these facets of social reality in purposiveness itself. Two ways forward present themselves. If the universality of choice is abandoned, there must be alternative modes of purposiveness. If it is to apply universally, there must be a part of

purposiveness not captured by the logic of choice yet connected to it. The critical realists take the former approach (Lawson, 1997, 177-80; Heap, 2004, p. 159). The Austrians take the latter.

4.4 The Logic of Choice vs. The Logic of Action

The key distinction between Austrian economics and other marginalist schools of thought is aptly captured by Israel Kirzner's distinction between the logic of action and bare Robbinsian maximization (Kirzner, 1960, ch. 7). The logic of action, or praxeology, includes not only choice but also the subjective formation of opportunity sets over which choice occurs (Kirzner, 1982, pp. 143-8). Agency involves both defining and ranking objects of choice. Ergo, praxeology investigates not only choice, but also entrepreneurship, “the department within human action in which the very framework for calculative economizing activity is, in an open-ended, uncertain world, selected as being relevant” (*ibid.* 148).

Mainstream economic theory pits man against a single foe: scarcity. Hence the dominance of the Robbinsian definition of economics as the study of maximizing (economizing) activity. Austrian theory, on the other hand, confronts agents with scarcity *and* (Knightian) uncertainty. This second problem of agency has been variously discussed by Austrians under the headings of “sheer” or “unknown” ignorance (Kirzner, 1992, p. 47), “real time” (O'Driscoll and Rizzo, 1996, pp. 3-4), or knowledge problems (rather than mere information, Boettke, 2002A). But the upshot for understanding action is always the same: opportunity sets—the means and ends of action—are neither *given*

nor *fixed*. Agents always confront a problem of scarcity, but, on account of uncertainty, the structure of that problem must be subjectively discerned (Langlois 1994).

Folding uncertainty into the logic of action renders agency as a causal force embedded in its environment. For uncertain agents, the setting of action not only provides external constraints but also influences the opportunity sets over which choice is made. Environmental factors freely enter the analysis as material content of beliefs and choices (Runde, 2001). Thus, even though the importance of choice is universalized, social phenomena are not reduced to aggregated choices. “Representative agents” are *not* isomorphic to individual choice. Admitting such influences makes praxeology causal rather than strictly conjunctive, as evidenced by the Austrian attitude towards prediction:

[P]rediction can never imply anything regarding quantitative matters... The fundamental deficiency implied in every quantitative approach to economic problems consists in the neglect of the fact that there are no constant relations between what are called economic dimensions. (Mises, 1949, pp. 137-8)²⁹

Of course, the travails of uncertainty that plague the forecaster also plague agents more generally. When opportunity sets are not fixed and given, agency breaks into an open universe and becomes liable to error. Economic processes driven merely by marginalist engines inevitably grind to a halt. The tautological logic of costs and benefits inexorably dissipates rents, leading to an equilibrium condition. Not denying man's conscious purposiveness, the only method open to marginalists for depicting open-ended processes is some form of uncertainty (Knight, 1921, p. p. 197): opportunity sets must not be given and fixed. If they are, agents will learn, mastering their environment and reaching some form of steady state. Relaxing the givenness of opportunity sets creates the possibility of

²⁹Caldwell (2004) argues that there is no real difference between what Hayek meant by “pattern predictions” and what Lawson means by “demi-regularities.”

error, as opportunities can be missed (Kirzner, 1978). Relaxing their fixity allows agents to be truly creative, resulting in open-ended processes that unfold in real time (O'Driscoll and Rizzo, 1996, pp. 3-4; Lewis and Runde, 2002, p. 203).

Uncertain agents need institutions and rules. In order to carry out plans successfully, some measure of stability in interaction with others is necessary. Absent uncertainty, atomistic probability calculations (for generating mixed-strategy Nash equilibria) will do. With an open possibility space, however, interaction is greatly facilitated by socially converged upon “rights” and “powers.” Legal rules, social norms, rules of thumb, and socially defined roles alike provide a more stable foundation for the formation of individual opportunity sets that facilitates successful interaction by furnishing inter-subjective meanings (Lachmann, 1971, ch.2; Lewis 2004B; Lewis and Runde, 2007). Though always manifested *through* human behavior, the causal powers of institutions and rules are irreducible to human behaviors themselves. If opportunity sets are given, all that is left for agents to do is atomically allocate given means among given ends. Uncertainty is the entry point by which inter-subjective social structures exert their causal influence on human activity.

Positing a dyadic structure of action that treats both scarcity and uncertainty distances Austrian theory from exhaustivist temptations while bolstering its universality. For example, a significant share of praxeology's explanatory power derives from the law of diminishing marginal utility. Mainstream economists ground this law in psychological assumptions about utility functions with negative second differentials in order to secure

determinate point predictions regarding human behavior. Since Menger, by contrast, recognizing the importance of subjective beliefs in *defining* objects of choice has made diminishing marginal utility part of the formal logic of action (Prychitko, 1994, p. 80). In brief: action involves choice, which implies ranking of ends. Ranked ends mean that substitutable means (including first and foremost the time it takes to act) will be apportioned to the most highly valued ends first. No psychological assumptions enter the analysis because the goal is to uncover causal connections rather than make point predictions. Austrian economics takes as its foundation only the formal fact *that* choice is made, making no assumptions about its content. Consequently, the law holds transfactly and universally *regardless* of the actualized content of choice: operating at a “deeper level,” “[t]he praxeological approach... does not necessarily require a clearly recognizable pattern of allocation” (Kirzner, 1960, p. 162). Uncertainty necessitates that the very objects of choice be *subjectively defined*, thereby actually *bolstering* the universality of this praxeological reasoning:

[I]t is in this subjectivism that the objectivity of our science lies. Because it is subjectivistic and takes the value judgments of acting man as ultimate data not open to any further critical examination, it is itself above all strife of parties and factions, it is indifferent to the conflicts of all schools of dogmatism and ethical doctrines, it is free from valuations and preconceived ideas and judgments, it is universally valid and absolutely and plainly human. (Mises, 1949, p. 22)

4.5 The Importance of Being Marginal

While Austrians uphold the universal relevance of choice, some critical realists instead take the alternative route, asserting multiple modes of purposiveness. Tony Lawson, for instance, argues that rational choice is a power that can either be exercised or not, and so its applicability to explaining any social phenomenon is a matter to be empirically

assessed rather than a theoretical *sine qua non* (Lawson, 1997, pp. 186-7).³⁰ Sometimes man chooses, but sometimes he follows routine or unconscious impulse (*ibid.* 177-80). I argue here that Austrians have the better of this disagreement, on critical realism's own terms. The critical realist ontology of social structure bolsters, rather than undermines, the universal relevance of marginalism.

Lawson posits an account of social structures—rules, relations, and positions—as “reproduced inter-dependencies” (Lawson, 1997, ch. 12). He establishes the intransitive reality of structures by pointing out that they serve as a means of both coordinating activity and signaling dissent (*ibid.*, p. 160). Rather than just a continually generated pattern reducible to individual activity, structures are a material cause of human action. However, they never exist independently, but are only ever revealed in acting. Hence, structures must be continually reproduced. “Inter-dependency” derives from the internally related features of many social structures, as opposed to external (accidental) relations. As mentioned above, the activities of a teacher and student are mutually inter-dependent, or internally related: they constitute the very relation in question. The powers and responsibilities of teachers and students, which will shape the activities of the individuals occupying those positions, are defined in terms of one another. Likewise, the efficacy of driving on the right side of the road as a means of avoiding accidents depends on whether other drivers follow the rule. Social structures and human agency thus

³⁰Lawson critiques Robbins not merely to distance himself from universal marginalism, but also to open up the sphere of economic inquiry to older considerations such as production and distribution (Lawson, 2003, ch. 6). Marginalism naturally tends towards an “economics as the study of exchange” paradigm. Austrian marginalists are no exception. But I am not concerned with the exact sphere of economics as such. More fundamental is the universality of marginalist explanations in social science more broadly. Whether the range of social phenomena considered “economic” is defined in terms of exchange, wealth, or production and distribution is a subsidiary issue.

constitute a causal duality. Agents utilize structures to achieve their ends, and in so doing reproduce and/or transform them.

Social structures, in order to exert material causality on action, must have some measure of endurance (Lawson, 1994, p. 11; Lewis, 2005, p. 97). Reproduced inter-dependencies presuppose reproducibility. Reproducibility presupposes incentive compatibility. Structures exist *in* purposive action; if they systematically produce avoidable failures to achieve sought-after ends they will be abandoned or modified. Neither reproduction, nor transformation, nor dissolution of social structures requires conscious alteration, but they must facilitate *some* conscious purpose since they only exist in such purposive acting. This Austrian approach has never been based on a constructivist rationality that assumes all facets of action are conscious:

Most of a man's daily behavior is simple routine. He performs certain acts without paying special attention to them. He does many things because he was trained in his childhood to do them, because other people behave in the same way, and because it is customary in his environment. He acquires habits, he develops automatic reactions. But he indulges in these habits only because he welcomes their effects. As soon as he discovers that the pursuit of the habitual way may hinder the attainment of ends considered as more desirable, he changes his attitude... The fact that an action is in the regular course of affairs performed spontaneously, as it were, does not mean that it is not due to a conscious volition and to a deliberate choice. Indulgence in a routine which possibly could be changed is action. (Mises, 1949, pp. 46-7)

“Acting, in the praxeological sense, consists in selecting a *pattern* of behavior designed to further the actor's purposes” (Kirzner, 1960, p. 161, emphasis added). Agent behavior may be routine or unconscious, but is always part of a larger pattern, or plan, that is chosen to serve some end. Even routines, such as driving a car over familiar terrain (Lawson, 1997, pp. 177-8), are part of a more encompassing purposive plan, giving the social scientist a powerful methodological point of entry. “The praxeological method...

rests on the parallelism between action and plan” (Lachmann, 1971, p. 49). Whenever a routine fails to serve its purpose, there is an incentive to change the routine. This fundamental “constraint” of purposiveness gives praxeology its point of departure (Kirzner 1960, p. 153).

Social structures—even when highly routinized—are no different, except that they are interpersonal. Reproducibility is a causal power of structures that depends on their ability to align incentives. No reproduction of a social structure is complete without accounting for the incentive compatibility of its internal relations. Even to make sense of rebellious and transformational activity, the social scientist must understand the purposive coherence of the structure being rebelled against. “How did this structure facilitate human action in a way worth reproducing?” The marginalist logic of choice is simply the consistently worked out logic of this minimal requirement. Marginalism does not exhaust the account of any social structure, but it is universally applicable: any account of social reality dependent on systemic incentive *incompatibility* falls short.

The foregoing argument bears relevance on several persistent sources of tension between Austrians and realists. Austrian insistence on methodological individualism has been a constant target of realist critique, which argues that it is at odds with the concepts of intransitivity and emergence (Lawson, 1997, p. 159; Lewis 2004B, 2005). Of course, any careful analysis reveals that the substance of Austrian arguments consistently accords with critical realists' proffered ontology (Runde, 2001; Beaulier and Boettke, 2004). The Austrian Paradox extends to methodological disquisitions as well; mainstream

terminology does not imply mainstream ideas. “Methodological individualism” entails a commitment to the universal, not exhaustive, relevance of the logic of action. It is not a denial of the reality of social wholes, but an indispensable method for explaining them (Mises, 1949, pp. 41-4).

A subtle but important asymmetry pervades Austrian methodology. Structure and agency are an explanatory duo, but structure exists only in action, not vice versa. Certain types of action require certain social structures (e.g., economic calculation). But the formal nature of acting is in no way dependent on social structure. Structures have a recursive effect on the content of action, but do not alter its fundamental nature, which includes purposiveness. Certainly agency draws on existing social structures but, while their emergent powers are irreducible to action, their existence must pass the test of incentive compatibility. The formal logic of action is the narrow gate through which any social scientific account must ultimately pass.

“Subjectivism” has come under similar attack, as has Hayek's “compositive method,” whereby the investigation of social structures involves their mental reconstruction (Lawson, 1997, ch. 10; Hayek, 1952 [1979], pp. 61-77; Caldwell, 2004, pp. 430-8). When the universal significance of praxeology is recognized, this controversy too dissipates into semantics. Hayek's argument is certainly not that *every* facet of emergent phenomena is reducible to individual ideas, for the importance of “unintended consequences” has been recognized all along (Runde, 2001). This accusation implies the possibility of constructivist accounts of social institutions, chafing against deeply held

Austrian sensibilities. Hayek clearly has in mind something like Menger's account of the development of money, which is rendered in terms of individual purposiveness at each (reproductive or transformational) step. Money must make sense to individual minds in order to continue in use (Hayek, 1952 [1979], p. 53), but its powers are by no means limited to those perceived by the agents that use it. “Meaning” is a necessary condition of social structures, not an exhaustive description, and so provides a reliable point of entry for the social scientist (Beaulier and Boettke, 2004). Unseen effects (including environmental changes and habit formation) can change the outcomes of human activity, but changes in activity itself cannot contravene the purposive character of acting. Subjectivism simply asserts that any explanation of human activity should be compatible with the omnipresence of individual plans, beliefs, and expectations.

4.6 Conclusion and Prospectus

Austrian economics stands simultaneously in two traditions, the marginalist and the heterodox. To the extent that it is marginalist, it overlaps with mainstream analysis. On one orthodox hand, it emphasizes individual choice and rationality. With the other heterodox hand, it balances that emphasis with a focus on open processes and emergence. Praxeology—the logic of action—recognizes the fundamental importance of incentives while leaving agency embedded in causally efficacious social structures. Not bound by the straightjacket of predictive benchmarks, it has consistently posited the sorts of transfactual laws that social ontology seeks to uncover. Recognizing the importance of marginalism reduces the remaining distance between Austrian and critical realist approaches to one of largely, if not entirely, semantics.

But even if my arguments have been largely convincing, mere concordance is no substitute for fecundity. Lawson critiques the Robbinsian economizing definition of economics precisely for the reason that its fruits—the broad generalizations of supply and demand—already command wide acknowledgment, even in Robbins' own time (Lawson, 2003, ch. 6). Economics becomes a set of calcified doctrines, with nothing for economists to do. Critical realism instead has in sight a progressive research paradigm that provides fertile ground for a wide array of questions and approaches, from local narratives to broad statistical inquiries. Austrians certainly share a belief in the basic marginalist principles of Robbins. Would extending marginalism to other social sciences likewise render them barren? Are economists consigned to a merely didactic role propagating well-known generalities?

Such warnings surely contain a germ of truth, and should be carefully heeded. However, the arguments above suggest several reasons to be optimistic about the potential fruits of continuing research along Austrian lines. First, recall that the formal logic obtains universally, not exhaustively. With agency embedded firmly in its environment, praxeological inquiries are limited only by the number of historical and potential social structures and transitions between them. The Austrian approach to the logic of choice suggests that “thick” empirical work has an important role to play in applying well-known generalities. Furthermore, when considering any given structure, mere marginalism will not suffice. Unintended consequences—ecological, psychological, and social—also play a central role in any social scientific inquiry.

Second, even a widely accepted theory has an important role to play in research. Lawson discusses “contrastive demi-regularities” as important motivators for research questions (Lawson, 1997, pp. 206-10). He points to synchronic, diachronic, and ideologically motivated comparisons as sources of new inquiries (*ibid.*; Lawson, 2003, ch. 9). But theory too can produce interesting contrastives, when history defies what logic dictates. Anomalous empirical findings can lead to amendments, expansions, or new applications of existing theories, or themselves be overturned by the weight of the evidence.

Third, even accepting the basic thrust of marginalist economics does not condemn one to theoretical sterility. Setting aside epistemological differences, Mises' praxeological approach clarifies and extends, rather than rejects, Menger's understanding of choice. Kirzner likewise articulates a more precise, dyadic vision of praxeology. It is certainly possible to work within a theoretical tradition and to acknowledge its (implicit and explicit) blind spots.

Finally, Austrian economics can provide an important avenue for advancing the critical realist project. As Caldwell (2004, p. 330) has pointed out, Austrians and mainstream economists largely agree on the level of “basic economic reasoning,” from supply and demand analysis to opportunity cost reasoning. Austrians and mainstream economists might teach a principles course in the same way, but part company on where to go from there. Since Austrian economics shares marginalist principles with the mainstream, it has an important point of contact by which to bring considerations of social structure to bear. Such theoretical commonalities are important for a process of immanent critique such as

that pursued by realists. For these reasons, critical realists should take a closer look at Austrian economics and its marginalist principles.

5 Conclusion

Accordingly, when I am talking with an orthodox economist who expounds all these economic principles as gospel, I am a rip-roaring institutionalist, and when I am talking to an institutionalist who claims the principles don't make any sense at all, I defend the system, the "orthodoxy."

-Frank Knight, *Intelligence and Democratic Action*, p. 82

Social scientists must walk a fine line between reductionism and superfluity. Injudicious applications of Occam's razor carry the potential of draining the lifeblood from serious scholarly endeavors. But mixing up a medley of disconnected theoretical tidbits muddles the clarity that could be had from its individual pieces. The former carries the danger of passing over essential insights; the latter of losing them to *ad hoc* concatenations of unrelated theories. These three chapters have attempted to outline a path that falls into neither trap. Placing knowledge alongside incentives is a minor tweak to the economic model of rational agency. But a minor change in microfoundations can have a profound influence on our understanding of social processes. The logic of action grows naturally out of the logic of choice rather than needing to be grafted on, and shores up the theoretical blind-spots of comparative institutional analysis. Attentiveness to the knowledge-generating properties of institutions opens the door to analyzing phenomena that are mere ephemera in standard models, such as the power of ideas. Several more potential implications of this approach merit mentioning.

The primary target of these essays has been that strand of literature in modern economics in which rational agents efficiently exploit the gains from trade within or between non-market institutional settings (e.g., Glaeser and Shleifer 2003). These models are predicated on the faulty premise that individual rationality is what permits real markets to clear, a premise inherited from the market socialists. They sport a false epistemic homogeneity between institutional contexts. Certainly agents are purposive in any institutional context. But absent the perception of profit opportunities by virtue of real price signals there is no reason to suppose that rents will be dissipated. Institutional transitions are not *prima facie* efficient simply because they have taken place.

If the first essay targeted a mainstream approach, the second targeted Austrian analysis just as much. Austrians are fond of claiming that the government does not have the knowledge to carry out some policy effectively or without unintended consequences. The problem is, this usually takes place without any examination of what knowledge the government is likely to possess. While such analyses are likely to turn up even more evidence in favor of the anti-interventionist argument, it is important to remember that interventionists do not sit in the hypothetical vacuum of planners in a worldwide socialist commonwealth. Policy is the outcome of a social process; evaluations of intervention should thus be cast as comparative institutional stories. This is as true of knowledge-generating processes as incentive-aligning ones. Hence the emphasis on Knightian uncertainty: without understanding the microfoundations of knowledge problems, asserting how they work in one institutional context or another may easily devolve into *ad hoc* judgments.

Take, for example, the analysis of the knowledge-generating properties of democratic political institutions. With Knightian uncertainty as a microfoundation, it becomes obvious that voting mechanisms cannot serve the same function as market prices in coordinating knowledge. Uncertainty means that options are not given. But voting necessarily takes options as given, whereas given prices can form the basis of and help evaluate hitherto unimagined plans. The move from market equilibrium to market process thus requires recognizing another role that money signals play in addition to mere incentive alignment. This is a fundamental asymmetry with public choice, where collective decision-making mechanisms cannot serve as the foundation for process analysis. In order to understand where the options that political agents choose from originate from, we must make some other turn. The media, for instance, would be a far better place to look than voting rules for understanding the knowledge-generating properties of democratic polities.

Uncertainty as a microfoundation may also have some importance for sifting through evidence from experimental economics. Experimentalists are fond of compiling behavioral anomalies and declaring them violations of rationality. The standard next step is to posit some sort of heretofore undiscovered preference. But these experiments—like the analytics they are based on—often assume epistemic homogeneity between laboratory conditions and real-world institutions. Taking uncertainty seriously means asking how these institutions generate knowledge of potential benefits and costs. This would undermine not only many experimental attacks on rationality, but also their use to inform

policy decisions when they fail to approximate real-world institutions. It may, in the end, be uncertainty that saves rational choice from encroaching behaviorism.

The approach taken in these essays also bears implications for theoretical welfare analysis. Treating opportunity sets as open naturally goes hand in hand with analysis of open processes, as argued in Chapter 3. Both the flux of existing phenomena and the emergence of truly new institutions, organizational forms, technologies, goods, and services sit uncomfortably with traditional welfare analysis. In particular, process analysis militates against focusing on states of the world as normatively relevant. The bread and butter of standard welfare economics is ranking states of the world precisely because standard positive economics is fixated on equilibrium states. It seems intuitively obvious that the advent of new ways of doing things has as much or more to do with human flourishing than does the allocation of fixed resources. And surely income mobility is at least as important as a snapshot of distributional equality. By placing welfare analysis in a spatial framework with given axes, the normative approach to economic efficiency has actively distanced itself from the important question of novelty and learning (Buchanan 1999). The trick is to find a welfare standard that applies for more than a transitory moment.

On the whole, this seems to entail a move towards a capacities view, such as Sen's. Capacities can be conceived of as causal power underlying open-ended processes. This approach might include a reconsideration of the relevance of virtue ethics for political economy and welfare economics. Knightian uncertainty means that man cannot

exhaustively map the future outcomes of his action. Taking uncertainty seriously may entail a shift away from normative standards that rank the desirability of states of the world and prompt alternative questions: what traits best enable agents to adapt to (and creatively shape) an unknowable future? What institutions best channel the capacity for creative responsiveness? And how do institutions help to inculcate desirable or undesirable character traits?

But, as argued in the first essay, the causal powers of institutions themselves can form a critical component of welfare analysis. As relatively enduring, they could stand as a far better candidate than transitory consumption patterns for the objects of choice in Paretian analysis. The conclusion of this line of analysis, if I were to hazard a guess, would be that constitutional choice is the *only* normatively meaningful application of Paretian analysis to real world problems. But while this constitutional approach overcomes the difficulties of allowing for welfare analysis of open-ended processes, it may perhaps be more fruitful to drive a larger wedge between choices—necessarily tightly proscribed events—and overall human welfare.

Finally, the rhetorical view of politics stressed in the second essay may open the door to a fruitful interdisciplinary dialogue with an important branch of normative political philosophy focused on public reason (Rawls 1996). The normative value of publicly articulated justifications may be affected by the fact that political processes do not translate them one for one into policies. Political economists ready to admit the importance of the power of ideas could bring to the discussion a nuanced analysis of the

effects of various sorts of ramifications. In addition, it is likely that, though normative in its purposes, the considerable philosophical firepower brought to bear on public reasons could greatly accelerate the positive understanding of language in politics by social scientists.

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Curriculum Vitae

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